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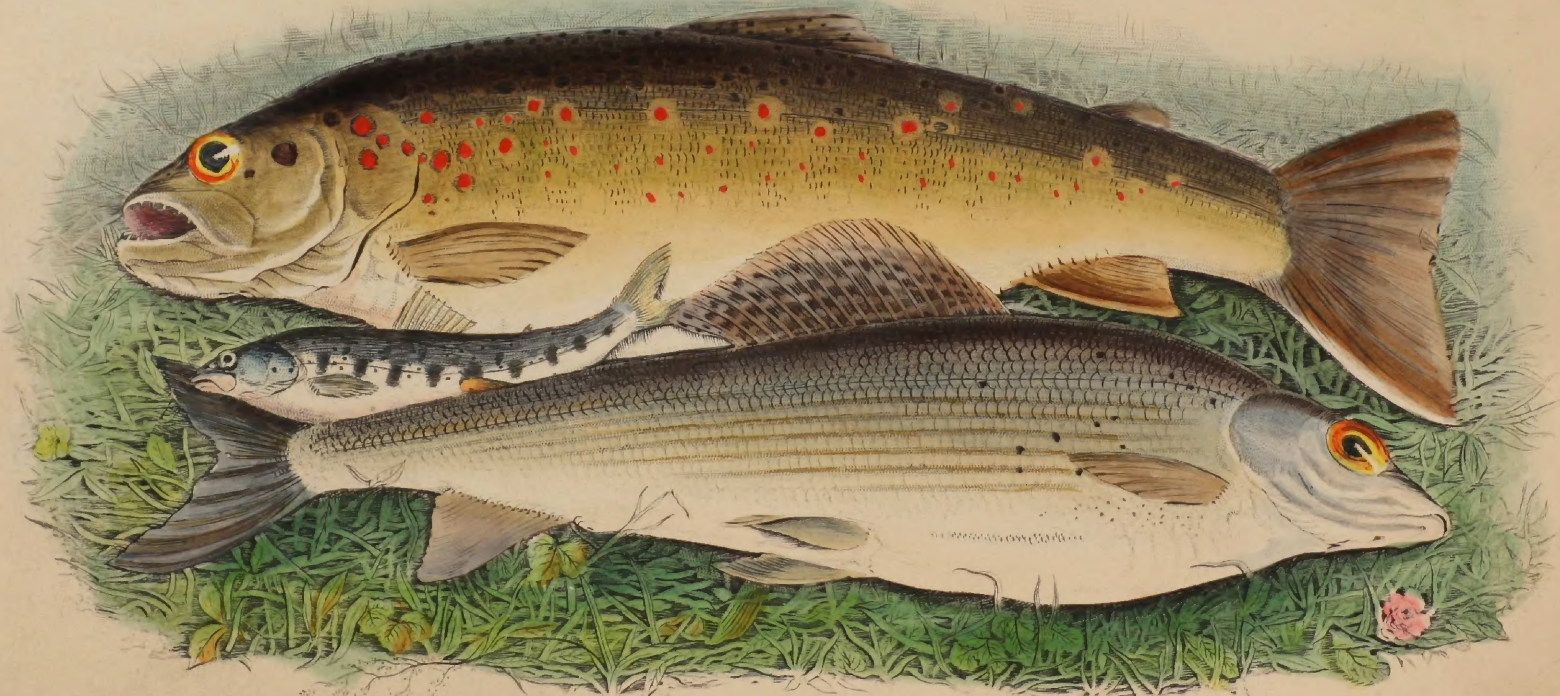
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THE TROUT.

SALMO FARIO.

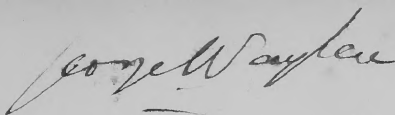


THE PARR.

SALMO SALAR. (*Salmo Salmulus, olim*).

THE GRAYLING.

SALMO THYMALIUS.



THE

FLY-FISHER'S ENTOMOLOGY,

WITH COLORED REPRESENTATIONS

OF THE NATURAL AND ARTIFICIAL INSECT;

AND A FEW OBSERVATIONS AND INSTRUCTIONS

ON TROUT- AND GRAYLING-FISHING

BY ALFRED RONALDS.

WITH TWENTY COLORED PLATES.

Fifth Edition revised, with Additions

BY PISCATOR.

"Devouring Ephemerals! Can you not suffer the poor insects to sport out their day? They must be insipid eating — but here are some savoury exceedingly * * * * * they carry *sauce piquante* in their tails. Do try the taste of this Bobber — but any of the three you please — There! Hold fast, Kirby — for that's a Whopper."

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1856.

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IN A COURSE OF LECTURES
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PREFACE

TO

THE FIFTH EDITION.

IN the Midland Counties, and especially in Derbyshire, the “Fly-Fisher’s Entomology” has long been considered an *authority*; and as the Derbyshire waters have of late years risen in the esteem of the fly-fishers, a new and more complete Edition of the work has been rendered indispensable. In these counties, the streams, though preserved, are thrown open by the liberality of the proprietors; and here the angler, availing himself of the facilities of the rail, may be found enjoying his holiday at many a pleasant country inn, in the county of the Dove, the Wye, and the Derwent. The Blithe, a sweet trout-stream in Staffordshire, close

to Cresswell Station, was the scene of Ronalds' early experience; on the little bridge, close to the present Station, stood his *observatory* (p. 5.); and though his residence, at a later period, in Wales, extended his knowledge of the art, and enabled him to adapt his instructions to the different waters in which he fished, yet the Midland streams are still the proper *home* of his observations: that *Dove*, where Cotton erst hung up the *thick-bodied* fly of more southern counties, "in his window, to laugh at."

One thing is certain, that whoever masters the art of making the delicate Duns and dashing Palmers of Ronalds, will be at no loss to frame those coarser imitations of nature that are successful in Scotland or elsewhere. Learn to imitate the various patterns of this work, *exactly*, first; and when once an adept, you may vary your imitation almost endlessly; and following the guidance of Nature's self, may

"Snatch a grace beyond the rules of art."

But to sit down by the brook-side, and copy the fly that you have just beaten from

a bush upon the stream, is a feat that the *learner* had better not attempt. Enough for him if he can, in a warm, sunny window, with all his tools about him, first make his *droppers*, hackle-wise, and point his lash with the best he can purchase, till study and practice have perfected him sufficiently to make a *Winged* fly also, *well put together*,—the hackle just covering the point and bend of the hook, and no more ; and the wing the exact length of the fly, from head to tail, and neither too full in the feather, nor too scanty.

The present edition of the “Fly-fisher’s Entomology” has the full sanction of the Author, for whose approval the chief alterations were sent to him in Australia. These will be found to consist mainly, in revising the nomenclature of Chap. IV. ; and ascertaining the *specific names* of all the insects where not previously given, so that the real insect may be examined in the collections of naturalists, and often obtained from them. It is to be hoped that some fly-makers will adopt the plan of keeping cases of the real insects for sale, as well as the artificial

imitations. A set of such specimens, pinned in a small glazed case, lined with cork about three-sixteenths of an inch in thickness, would be a very useful *illustration* and accompaniment to the present Work. And the difficulty will appear trifling, when it is considered that *while to an entomological collector the rarity of a species enhances its value, to a fly-fisher, on the other hand, the frequent occurrence of a species, and its being widely dispersed, or found upon all waters, constitute the strongest reasons for preferring it*; because the fish (*ceteris paribus*) feed upon such species the more readily, as we see in the instances of the *green drake*, and of various *caddis flies*.

Another addition is the *number of the hook* proper to be used in imitating each fly, and remarks wherever a *variation* in this respect is to be recommended.

The fourth chapter of the work has also received an *Introduction* of some length, and the Plates have been corrected; and where the meaning of the Author seemed imperfectly conveyed, a fuller explanation has been given in the text. A few other

alterations too will be found. Particular attention has been bestowed on the *Double Palmers*, as these are so important a feature in the work, and so deservedly celebrated. There are anglers on the Dove who never use any other fly on their lash but two of these Palmers, Nos. 45. and 46. This, however, is going to an extreme, and savours of prejudice, or laziness, rather than of sportsmanlike skill and industry. Such anglers seldom *make their own flies*; and unless this accomplishment has been attained, *half* the pleasure of fly-fishing has not been tasted.

As this book is intended to *encourage* and *assist* the observation and ingenuity of the young angler, the instructions have been in places simplified, as in the section showing "How to make a Fly:" for to encumber the process with "invisible knots," and other niceties, seemed too discouraging to the beginner; and he will find that *newly made* flies will not come to pieces (though finished with a very simple knot) before the gut is frayed near the head of the fly. This

danger, *more imminent*, has been provided against, by advising to make all large flies on *loops*, and so guard the weakest point. The fear of “cracking” off a fly is thus lessened materially, and the pleasure of the beginner much enhanced.

The prospects of the fly-fisher are materially brightened by the recent investigations of scientific men, on the subject of breeding fish artificially. The protection of the spawn, and of the young fish, appears so simple a means of multiplying our best fish, that we may hope to see many a troutless stream replenished, and fresh Subscription Waters started, under the most hopeful auspices. The fear of thinning the fish will not haunt the proprietor of a good stream so painfully as heretofore, and the graceful art of fly-fishing will gain fresh votaries. That any one who has once conceived a taste for it, should transfer his affections to other sports, need not be apprehended. For, to use the words of Mr. Bainbridge, to whom fly-fishing is so deeply indebted, “It is a fact worthy of notice, that although many persons have quitted other sports for

the amusement of *fly-fishing*, yet memory does not furnish a single instance of a fly-fisher deserting his occupation, and transferring his preference to any other of the list of rural sports.”

PISCATOR.

Thames Side, February, 1856.

PREFACE

TO

THE FIRST EDITION.

THE Author of this little work entreats that it may be considered and judged of as the labour, or rather the amusement, of an amateur; whose chief object has been to facilitate to the tyro in the art, the making and choice of artificial flies, on a plan of elucidation derived from personal experience.

Having himself sorely felt the inadequacy of mere verbal instructions to enable him to imitate the natural fly correctly, or even approximately, and the little utility of graphical illustrations unaccompanied by the principle requisite—*colour*, he has been induced to paint both the natural and artificial fly from nature, to etch them with his own hand, and to colour, or super-

intend the colouring of each particular impression.

He therefore presumes to hope that he has succeeded in giving a useful collection of the leading flies for every month in the season, and that any one, who may be led by it to a choice of flies from the stock of the manufacturer, or to the construction of his own, will not have cause to repent having consulted the catalogue, chiefly composing the fourth Chapter.

But since in his endeavours to improve the art of fly-making, careful observations were made relative to some of the habits of the Trout and Grayling, and of many insects upon which these fish prey; it is hoped that a few of these observations, intermixed with a little useful information, and some remarks on other points more or less connected with the principal subject, will not be thought inappropriate. These form the subjects of the three preceding Chapters.

Chiswick, June, 1836.

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THE FLY-FISHER'S ENTOMOLOGY.

CHAPTER I.

OBSERVATIONS ON THE TROUT AND GRAYLING.

"I arrived there at dusk, and beginning at the top of the stream, fished it step by step. When I came to the middle of the stream, where it was still very rough, there was a splash at the fly, as if some one had thrown into the water a large paving stone, and my line flew over my head. On looking at it, the sixteen hairs were *staring* in all directions, but *the fly was gone*."—ARUNDO, p. 31.

THE TROUT, — *Salmo Fario* of the Naturalist,— is generally the prime favourite of the fly-fisher, both for his beauty, and for the sport he affords. His enamelled sides, studded as with rich gems, and his tints of yellow gold, make him bear comparison with the salmon in point of beauty; while the amount of sport annually enjoyed in Trout-fishing far exceeds that yielded by his rival in this country.

Of the three varieties, the red, the yellow,

and the white, the red is preferred both for beauty and flavour.

This justly-esteemed fish, when in the best condition, measures from the nose to the fork of the tail twice as much as his girth. The weight of trout *usually* taken with the fly is from two ounces to two pounds and a half; but they are *sometimes* taken of four, and five pounds, and even larger; but under three or four ounces they are *too* small for the creel.

The Trout has eight fins, viz. one dorsal, one anal, one caudal, two pectoral, two ventral, and a little fleshy one without spines on the back near the tail-fin.

Sir H. Davy says (Salmonia, p. 73.): "I have known the number of spines in the pectoral fins different in different varieties of Trout: I have seen them twelve, thirteen, and fourteen; but the anal fin always, I believe, contains eleven spines, the dorsal twelve or thirteen, the ventral nine, and the caudal twenty-one."

The back fin has a pale brown colour, with darker brown spots upon it; the others (including the tail) have a red tint. The colour of the back, when in perfect condition (which is generally in May, but in some waters not until June), is usually a dark olive green, studded with a mixture of black and brownish spots. The sides are shaded off from the olive to a

greenish yellow, studded with red spots; the black spots gradually vanishing. Lower down the yellow tint approaches a salmon colour, and the belly is nearly white, without any spots.

The whole surface of the fish, when in condition, presents a beautiful gradation of tints: but the complexion varies greatly in different waters, and also in all waters at different periods of the year. It is principally modified by his state of health.

Sir H. Davy says: "The colouring matter is not in the scales, but in the surface of the skin immediately beneath them, and is probably a secretion easily affected by the health of the animal." (*Salmonia*, p. 40.)

After spawning time, (i. e.) the month of September or October, both the male and female lose their more beautiful tints, become thinner, and are considered quite out of season; and towards the end of the winter, and even in March, some parasites, like leeches, about an inch long, green and semi-transparent, are found adhering to them. When in this sad state the flesh, if cooked, cuts soft, and looks white, and very different from the rich salmon colour which always indicates good condition and quality. Every true disciple of Izaak Walton who may take such a thin *black-looking* Trout will return the lanky trophy to its native element.

Haunts.

To enumerate the rivers, streams, and brooks of this country, which the common Trout inhabits, would be an endless and useless task; he may be said to frequent almost all of them, and will even sometimes be discovered in a mere ditch (in spawning time), having scarcely depth of water enough to cover the back.

He delights in rapid clear-running waters, with a rocky or gravelly bottom. An attempt has been made in the annexed plan to point out his favourite haunts, &c. in such waters. They are,—1st. The *head* and *tail* of a *stream*, in other words, the ends of a rapid, as A. 2ndly. The eddies formed by water passing round an obstruction in the current, as B. 3rdly. Such tracts as C, where a chain of bubbles or little floating objects indicate the course of the principal current; which course is chiefly dependent upon various reflections of the water, from projecting banks, rocks, scours, and shoals, and may often be guessed at, when not sufficiently visible, by attending to the position of the banks, &c. 4thly. At the roots of trees, or in other places where the froth (called in Staffordshire Beggar's Balm) collects. 5thly. In little whirlpools, as G, he will often be found *during a fresh*. He may then be angled for, if the water is much discoloured, with ant-eggs, wasp-grubs, or gentles; but a few hours

will often clear the rivers in the Peak, and enable the angler to resume the fly-line. 6thly. and lastly, a current *between weeds*, as at Q, where the bottom is gravel, is a sure harbour for fish: as the weeds not only shelter the Trout, and give him boldness, but also are the lodgings of numerous water insects. All such places are most favourable for sport; for insects follow the same course as the bubbles, &c., and are there sought by the fish.

The larger Trout are on the scours, as at D, in the night, chasing minnows and other small fish. In the day, they are cautiously watching for food in deep holes, under hollow banks, or roots of trees, or in the angles of rocks, as E. In May and June, when the fish are strong, they are chiefly to be found in the more *rapid* parts of the water, as F; and *on the feed*, consequently.

These remarks, although not strictly applicable to all streams, may still, perhaps, not be found useless, and particularly in respect of *brooks* and *small* rivers.

The great shyness of the Trout renders it extremely difficult to obtain any accurate knowledge of his habits, by ocular demonstration. Even a thick bush will seldom be found sufficiently opaque to conceal the observer.

Observatory.

With a view to obviate this difficulty I built a little fishing Hut, or Observatory, of heath, overhanging a part of the river Blythe, near Uttoxeter, in Staffordshire, which seemed favourable for the purpose. Its form was octagonal, and it had three windows, which being situated only four feet and a half above the surface of the water, allowed a very close view of it. The middle one commanded a *Scour*, each of the two others a small Whirlpool or Eddy. The curtains of the windows were provided with peepholes, so that the fish could not see his observer, and a bank was thrown up, in order to prevent a person approaching the entrance of the hut from alarming the fish.

The stream was regularly fished, and nothing more was done to interfere with the natural state of its finny occupants.

The stationary position in which the Trout is enabled to maintain himself in the most rapid stream, poised like a hawk in the air, was the first thing which struck us, in our observations. Even the tail, which is known to be the principal organ of propulsion, could scarcely be observed to move, and the fins, which are used to balance him, seemed quite useless, excepting when he saw an insect; then he would dart with the greatest velocity through the opposing current

at his prey, and as quickly return. The station which he occupies in this manner is invariably well chosen. Should a favourite haunt where food is concentrated by the current be rather crowded by his fellows, he will prefer contending with them for a share in it, to residing long in an unproductive locality.

A Trout will chiefly frequent one place during all the summer months. It is well known that he quits the larger waters, and ascends the smaller brooks for the purpose of spawning in October and November, when the male assists the female in making a hole in the gravel wherein to deposit the ova. By some it is supposed, that they both lie dormant in the mud during the greatest severity of the winter.

Sense of Hearing.

In order that we might be enabled to ascertain the truth of a common assertion, (viz.) that fish can hear voices in conversation on the banks of a stream, my friend, the Rev. Mr. Brown, of Gratwich, and myself, selected for close observation a Trout poised about six inches deep in the water, whilst a third gentleman, who was situated behind the fishing-house, (i. e.) diametrically opposite to the side where the fish was, fired off one barrel of his gun. The possibility of the flash being seen by the fish was thus

wholly prevented, and the report produced not the slightest apparent effect upon him.

The second barrel was then fired ; still he remained immovable ; evincing not the slightest symptom of having heard the report. This experiment was often repeated, and precisely similar results were invariably obtained ; neither could I, or other persons, ever awaken symptoms of alarm in fishes near the hut by shouting to them in the loudest tones, although our distance from them sometimes did not exceed six feet. The experiments were not repeated so often that they could become habituated to the sound, if heard.

It is possible that fishes may be in some manner affected by vibrations communicated to their element, either directly, or by the intervention of aerial pulsations ; although it does not seem to be clearly proved that they possess any organ appropriated exclusively to the purpose of hearing. At all events, it appears that neither the above-mentioned explosions, nor the loud voices, had power to produce vibrations or undulations in the water, which could so affect them.

Leaving the discussion of this intricate subject to more able and learned speculators, we will deem it sufficient for us to know that the above-mentioned Trout had no ears to hear either the voices or the gun ; and I firmly believe, that the

zest which friendly chat often imparts to the exercise of our captivating art, need never be marred by an apprehension that sport will be impaired thereby.

Sight.

Of all the senses in fish, sight is perhaps that which is of most importance to them. Their eyes are of course well adapted to the element they inhabit ; indeed their subsistence seems to depend mainly upon the great sensibility of the optic nerve, and the just adaptation of the crystalline and other humours to their proper office.

A fish can perhaps frequently distinguish much *more* of objects which are out of his own element than it is often imagined that he can.

When Mr. A. B. (fig. 1. plate 2.), for instance, situated upon a certain eminence at a given distance from a fish, C, which is near the bottom of the water, looks over the edge of a bank, D, in the direction A F Z, he might (if unacquainted with the laws of refraction) imagine, that neither the fish C, nor any other fish below the line of his direct vision, A F Z, could see him ; whereas C could see A B by means of the pencil of light, A F C E B, *bent*, or refracted at the surface of the water, E F, and the image of A B would appear in the eye of the fish shortened and transferred to G H. The fish, in fact, could see the whole of

the man, round, or over the corner of the bank, by the aid of the water above C, if both were situated as respectively represented in the diagram ; but if the surface of the water should be at I K, (i. e.) about as low as the fish's eye, then he could not see any part of the figure A B, because a straight or unrefracted pencil of light, A C B, would be obstructed by the bank.

. Increased *obliquity* in pencils of light falling from an object upon a surface of water, is accompanied by still more rapidly increasing *refraction* : but the *distinctness* with which the object is seen *decreases* in an inverse proportion.

The bending or refraction which a pencil of light, as N E O F M (fig. 2.), falling very obliquely upon the surface of the water, undergoes before arriving at the eye of a fish, at O, is sufficient to produce very great indistinctness and distortion of the image of M P formed in his eye.

Perhaps indistinctness of vision may, *on other accounts*, also take place in the eye of a fish looking through air. The crystalline and various other humours may not be capable of such comprehensive adjustment as would enable him to see so distinctly through air as he can through water.

But long before a pencil of light, as N E L, becomes horizontal, it will not enter the water at

H
G

Fig 1



Fig 1



all ; consequently, although the fish at O may see the upper part of the man situated at M P, he will do so very indistinctly, and in a new position, because the pencil N E O F M will be very much refracted ; he will not see the part, N L, of the man at all, because the pencil, N E L, does not enter the water at all ; and he will see probably his legs, L P (in the clear water), because there is neither refraction nor obstruction to prevent him. So that the figure M P will, in the eye of the fish, be cut into two portions, separated from each other by a long unsubstantial interval.*

The application of those two little theorems to the use of the fisherman is very obvious.

In the first place, a low bank, almost on a level with the water, is a great advantage to the fisher, who is there seen with less distinctness by his game : thus the shelving gravel beds which reach far into the Dove, and other Trout streams, are so many most advantageous positions for the angler. (Pl. I. K.)

* This diagram is constructed on two well-known optical laws, viz. first, the sine a. b. of the angle of incidence, A E f, of a ray of light passing out of air into water, is always to the sine, c d, of the angle of refraction, C E e, as about four to three ; and, secondly, light will not pass out of air into water, if the angle of incidence, N E f (fig. 2.) exceeds about 88 degrees, but will be reflected.

The old experiment of the shilling and the basin of water affords an easy practical demonstration of the first theorem in the text.

Secondly, the wader, who is but ankle deep, has an any advantage over any angler on the bank: and by very *moderate* wading, many scours and shallows may be fished with success, where, in bright summer weather, nothing could be done from the banks: for example, in the clearer parts of the Dove, and other bright streams.

Thirdly, in brooks, where fish are looking *up-stream* for the flies and other food which floats down to them, good sport is to be had in bright weather by walking up the middle, and casting either fly or worm before you, especially where the water is *broken*, either by running over stones, or by tumbling over ledges of rocks, &c., into little pools and basins. And observe, that fish cannot see *behind* them; all optics forbid it, especially when they are not looking out sharply.

Taste and Smell.

It seemed almost impossible to devise experiments relative to the sense of smell in fishes, which would offer the prospect of satisfactory results, without depriving the animal of sight; the cruelty of which operation deterred me from prosecuting the inquiry.

Observations on the taste of fishes are involved in still greater difficulty. I once threw upon the water, from my hut (by blowing them

through a tin tube), successively, ten dead house-flies, towards a Trout known to me by a white mark upon the nose (occasioned by the wound of a hook), all of which he took. Thirty more, with *Cayenne pepper and mustard* plastered on the least conspicuous parts of them, were then administered in the same manner. These he also seized, twenty of them at the instant they touched the water, and not allowing time for the dressing to be dispersed; but the other ten remained a second or two upon the surface before he swallowed them, and a small portion of the dressing parted and sank. The next morning several exactly similar doses were taken by the same fish, who probably remembered the previous day's repast, and seemed to enjoy them heartily. From these and similar experiments, such as getting Trout to take flies dipped in honey, oil, vinegar, &c., I concluded that if the animal has taste, his palate is not peculiarly sensitive.

My experience goes to prove, contrary to the opinion of some who say that the Trout will take *every* insect, that he does not feed upon the Honey Bee (*Apis mellifica*), or Wasp (*Vespa vulgaris*), and that he very rarely takes the Humble Bee (*Bombus*).

It seemed to be a common practice with those who plied for food near the hut, to make a very

strict inspection of almost every little object which floated down the stream, taking it into the mouth, sometimes with avidity, sometimes more slowly, or cautiously, as if to ascertain its fitness, or unfitness, for food, and frequently to eject it instantly.* This seems to favour the notion, that if the Trout has not a taste similar to our own, he may be endowed with some equivalent species of sensation. It may also account for his taking a *nondescript* artificial fly; but it furnishes no plea to quacks and bunglers, who, inventing or espousing a new theory, whereby to hide their want of skill or spare their pains, would kill all fish with one fly, as some doctors would cure all diseases by one pill. If a Trout rejects the *brown* hive bee at the time that he greedily swallows the *March-brown* fly, it is clear that the imitation should be as exact as possible of the last, and as dissimilar as possible to the first.

I have very frequently watched fish in an apparently hesitating attitude when Bees and Wasps were within their ken. How far either smell or taste may be concerned in this seeming indecision I cannot determine.

On one occasion I observed a Humble Bee which floated down the stream visited by a Trout,

* After having, perhaps, appropriated some little insect embarked upon it.

who suffered himself to descend also with the current just under the Bee, his nose almost touching it for about three feet, but he struck away without taking it.

At another time I saw a fish swim up to a Humble Bee which was thrown to him, and examine it very attentively; he then cautiously and leisurely took it in his mouth and descended with it, but immediately afterwards gave it up; he then seemed to be closely occupied with another Humble Bee, swimming up to and away from it, six times, each time almost touching it with his nose. Ultimately he took this also, but immediately rejected it again.

Sir H. Davy (*Salmonia*, p. 28.) says: "The principal use of the nostrils in fishes, I believe, is to assist in the propulsion of water through the gills for performing the office of respiration; but I think there are some nerves in these organs which give fishes a sense of the qualities of water, or of substances dissolved in or diffused through it, similar to our sense of smell, or perhaps rather our sense of taste, for there can be no doubt that fishes are attracted by scented worms which are sometimes used by anglers that employ ground baits." Also, p. 184., he says: "We cannot judge of the senses of animals that breathe water — that separate air from water by their gills; but it seems probable that as the

quality of the water is connected with their life and health, they must be exquisitely sensible to changes in water, and must have similar relations to it, to those which an animal with the most delicate nasal organs has to the air."

Surely no reasoning can be more sound than this. Should not our endeavours be directed, rather to this discovery of sensations in fish, which we have not, than to attempts at comparison between our own senses and theirs?*

Having examined the stomachs of many Trouts taken in almost every week throughout the three last entire fishing seasons, with a view chiefly to assist my choice of flies for the catalogue in our fourth chapter, I found that his food consisted, besides *Flies* and *Caterpillars*, principally of *Water Larvæ*, as *Strawbaits*, and *Stonebaits*, swallowed whole, with the stones and small shells adhering to them,—*Squillæ*, or *Fresh-water Shrimps*, *Small Fish*, *Young Craw-fish*, *Spiders*,

* Those who may have curiosity enough to pursue this interesting topic, might possibly find amusement in the perusal of a paper read to the French Institute by M. Duméril, August 24th, 1807, and translated in Nicholson's Journal, vol. xxix. p. 344., in which many circumstances judiciously adduced, and fairly reasoned on, lead him to three general conclusions; viz. 1st. That the organ of taste in fishes, if taste they have, "does not reside in the mouth." 2ndly. That the sensation of taste, or some equivalent sensation, "is imparted to them by the apparatus which had hitherto been considered as adapted to perceive the emanations of odorate bodies." And, lastly, "That no real smell can be perceived in water."

Millipedes, *Earwigs*, and Water Beetles. I never discovered Frogs, Snails, or Mice, but have no doubt that other waters afford other dainties; and "*Sauce piquante* of fish-hooks" is common to most Trout streams.

A convenient method of examining the contents of the stomach is to put the materials into a hair sieve and pump clean water upon them; when parted and sufficiently clean the whole may be put into a large cup of *clean water*, for examination.

This method of testing the actual food of the fish in different waters and seasons will give the angler most valuable information respecting his game. *Worms* are the *earliest* bait that can be employed with success after the winter; then comes the troller's turn, with his spinning minnow or *bleak* for the larger Thames Trout; and the fly fisher will find the fish in the humour for feeding on the various *insects* that skim the surface of the brook, as the advancing spring brings forth its teeming myriads, and peoples the glad waters anew with winged life and animation.

THE GRAYLING.

"Most writers, in treating of this fish, have stated that it struggles but for a very short time, and is, therefore, productive of little diversion; but the contrary is not unfrequently the case."
—BAINERIDGE.

THE Grayling, *Salmo Thymallus* of the naturalist, is a more elegantly formed fish even than the Trout. He has a smaller head and mouth, is broader across the shoulders, and tapers off more rapidly toward the tail, which is more forked. The front of the eye is elliptical, and the pupil much more elongated than that of the Trout, the side towards the nose being drawn out to an acute angle. The opposite side is less acute.

His back fin is very large. It has twenty-three spines, the ventral fin (near the head) has sixteen, the pectoral ten, the anal fourteen, and the tail eighteen.

He sometimes grows to the weight of about three pounds, though one of a pound and a half is considered a good-sized fish, and larger are not very often caught with the fly, the usual weight being from two ounces to a pound of those which rise freely to it. The fish of the spawn of April or May (measuring from the

nose to the fork of the tail) grows to about six inches by the next April.

A general tint, which may be called a light blue silvery grey, pervades nearly the whole surface of his body, excepting the belly, which is white or nearly so, but the scales often exhibit iridescent hues, of great beauty.* The back and head are of a much darker grey, but its components cannot, perhaps, be described verbally. Some lines of brown are intermixed with the grey of the sides, and a few black spots are seen near the shoulder. The black fin has a purplish tint studded with large dark spots, the other fins are not so red as those of the Trout, but have more yellow-brown in them shaded off with purple. The tail is a kind of slate colour. The colours vary a little in different waters, and, unlike the Trout, the better the condition, the

* From a very curious series of experiments detailed by Sir David Brewster in his excellent Treatise on Optics (p. 113. et seq.), "it is obvious that the splendid colours of mother of pearl, &c. are produced by a peculiar configuration of surface; and by examining this surface with microscopes, he discovered in almost every specimen a grooved structure like the delicate texture of the skin at the top of an infant's finger," &c. By cutting grooves upon steel at the distance of from the 2,000th to the 10,000th of an inch apart, Mr. Barton produced still more brilliant hues, and his *iris* ornaments on brass and other metal, buttons, and ornaments of dress, are the result of machinery constructed on this grooving principle, upon which, we believe, depend similar phenomena in the peacock's feather, &c. In sun, gas, or candle-light some iris ornaments rival "the brilliant flashes of the diamond."

darker is the fish, especially upon the back and head: "and you are to note," that the throat has a long very dark brown patch upon it, visible when the mouth is open, when he is in high condition, but it is hardly to be seen otherwise. He is, however, seldom or never found in the miserable state so common to Salmon and Trout after spawning.

The Grayling is an excellent fish both for sport and the table, and as his finest condition occurs during the Autumn and Winter months, when the Trout season ceases, the Angler finds great pleasure and consolation in visiting the streams in the autumn in search of him, or even on fine days in winter. On this account, those who have not the Grayling in their waters, would sometimes do well in trying to introduce him.

The waters in which he thrives may be either clear or discoloured, but a rather peculiar formation of the bed of the current seems to be required, his favourite streams having now somewhat shallow and rapid, then long, slow-running, deep tracts; in which latter places he poises himself about three or four feet below the chain of insects, &c., as at H H (see plate 1.).

As he feeds principally on larvæ and flies, he should, according to Malthus, be populous (all other things being equal), in proportion as these insects are so.

Temperature, both atmospheric and aqueous, no doubt affects both the food and fish, as also may the chemical properties of the stratum over which the stream flows; the mineral held in solution by the fluid which he breathes cannot fail to affect his constitution in some measure.

But there exists no authority for the localities of the Grayling at all comparable with Sir. H. Davy, who "has fished much in, and inquired much respecting the places where it is found." At p. 221 (*Salmonia*) he says: "In the Test, where the Grayling has been only recently introduced, they have sometimes been caught between three and four pounds; in this river I never took one above two pounds, but I have heard of one being taken of two pounds and a half. The Grayling is a rare fish in England, and has never been found in Scotland or Ireland; and there are few rivers containing all the conditions necessary for their increase. I know of no Grayling river farther West than the *Avon*, in Hampshire; they are found in some of the tributary streams of this river which rise in Wiltshire. I know of no river containing them on the North coast West of the *Severn*; there are very few only in the upper part of this river, and in the streams which form it in North Wales. There are a few in the *Wye* and its tributary streams. In the *Lug*, which flows through the next valley, in

Herefordshire, many Grayling are found. In the *Dee*, as I said before, they are found, but are not common. In Derbyshire and Staffordshire, the *Dove*, the *Wye*, the *Derwent*, the *Trent*, and the *Blithe*, afford Grayling; in Yorkshire, on the North coast, some of the tributary streams of the *Ribble*,—and the *Swale*, from Richmond to two miles below Catterick,—and in the South, the *Ure*, the *Wharfe*, the *Humber*, the *Derwent*, and the streams that form it, particularly the *Rye*."

Again, at p. 203., he says: "Having travelled with the fishing-rod in my hand through most of the Alpine valleys in the South and East of Europe, and some of those in Norway and Sweden, I have always found the Char in the coldest and highest waters; the Trout in the brooks rising in the highest and coldest mountains; and the Grayling always lower, where the temperature was milder: and if in hot countries, only at the foot of mountains, not far from sources which had the mean temperature of the atmosphere; as in the Vipacco, near Coritzza, and in the streams which gush forth from the limestone caverns of the Noric Alps.

"Besides temperature, Grayling require a peculiar character in the disposition of the water of rivers. They do not dwell like Trout in rapid shallow torrents; nor like Char or Chub in

deep pools or lakes. They require a combination of stream and pool; they like a deep and still pool for rest, and a rapid stream above, and gradually declining shallow below, and a bottom where marl and loam is mixed with gravel; and they are not found abundant except in rivers that have these characters."

The Rev. Mr. Low says: "The Grayling is frequent in the Orkney Islands, as it is in Lapland and Switzerland; but it is rare in Scotland, and confined in England to the Avon near Salisbury, the Ure near Fountain's Abbey, the Dee between Corwan and Bala, and the Dove; also the Trent, the Wharfe, the Humber, the Rye, and the Derwent."

The Grayling is seldom known to take the Minnow, and I have never found any in his stomach, although I have taken out many Larvæ covered with cases of sand, and some having six stones attached to each, as also Larvæ when in the Nympha state. I have always found flies, and those principally of the more delicate sorts of Ephemeræ.

He rises with great velocity and almost perpendicularly to seize his prey, at the top of the water, and descends as quickly after making a summerset, for the performance of which feat, the figure of his body and the great dorsal fin seem well adapted; his agility on this occasion

is indeed so great, that he seems a phantom or flitting shadow ; hence, say some, the appellation *Umbra* changed into *Umbra*. It has been supposed that he feeds upon the water-thyme, but I never found any vegetable whatever in the stomach, though I have opened as many Grayling as Trout. He has, however, a rather peculiar scent when just taken from the water, fragrant and grateful to the fisherman, and thought by many to resemble that of thyme ; whence he has been called by Linnæus *Salmo Thymallus*, and by St. Ambrose "*the Flower of Fishes*."

He seems to be more social in his habits than the Trout, and is not so easily driven from his station by an approach ; but whether this be owing to his lying lower down in the water, or from his being naturally a less timid and more simple fish, remains yet to be ascertained. It is, however, probable that he has less acute perceptions than his rival the Trout ; for the young angler will soon find that, after missing him once, he may count upon a second rise ; when, if he is not *flurried*, perhaps he may secure his prize with greater certainty than if the fish had been hooked at first ; for he will take care not to check him during his first rush, but have him ready to give him as rapidly as the occasion requires.

CHAP. II.

OF ROD, LINE, AND OTHER TACKLE.

“ Omnia quæ multò antè memor provisa repones,
Si te digna manet divini gloria ruris.”

VIRG. *Georg.* i. 167.

First, all thy tackle thoughtfully provide,
Ere April call thee to the Wandle's side :
So shall the glory of the streams be thine,
The spotted trophies of the tapering line !

LIKE the bow of the Archer, the ROD of the Angler should be duly proportionate in dimensions and weight to the strength and stature of him who wields it. The strong or tall man may venture upon a rod about fourteen or fifteen feet long : but to the person who is shorter or less robust, one so short even as twelve or twelve feet and a half, and light in proportion, is recommended, as the command will be more easily obtained, and with very much less fatigue to the arm. The best materials are ash for the stock, lance-wood for the middle, and bamboo for the top ; the butt should have a hole drilled down it containing a spare top, and a spike is made to screw into the end, which is found useful to stick into the ground, and keep the rod upright, when landing a good fish. The ferrules of brass should fit into each other with screws.

A good Rod should be such that its pliability may be felt in the hand; yet it should not deviate or droop by its own weight, if held by the butt in a horizontal position, much more than a foot or two from a straight line.

The rings are usually too small; not allowing such slight obstacles on the line, as can never be totally prevented, to run with sufficient freedom through them; they should all be of the size of those usually put upon the stock. The rod may not have quite so neat an appearance thus treated, but this will be found to be amply compensated in its use; for the sudden stops occasioned by an accident to the line, whilst being pulled up rapidly, has often caused the escape of a good fish, the straining of, if not breaking, a good rod, and sometimes a total loss of the angler's *Vade Mecum*, *good temper*.

Rings may be had split down the middle, in the manner of key rings, very little heavier, yet larger, than the usual rings. These can be easily substituted upon the little metallic loops in lieu of the smaller rings, by the possessor of the rod himself, without at all injuring it. *Verbum Sapienti*.

Reel Line.

The beginner should not take the finest FLY LINE he can buy, but rather choose the strongest

line of this kind to be had, since too fine a line will not only be more likely to break than a heavier one, but will not be so easy for him to throw. A taper lined *entirely of hair*, is the easiest to cast with.

Reel.

Notwithstanding the many complaints which have been made of the REEL usually sold, no very great improvement upon it seems to have been put into practice. The principal requisites seem to be, in the first place, a capability of winding up the line rapidly; secondly, smallness; thirdly, lightness; fourthly, freedom from liability to derangement.

Perhaps rather too much of the first requisite is generally sacrificed for the sake of cheapness, and for the purpose of obtaining the second and third. A reel having a *sheave* upon which the line is to be wound, whose groove for the reception of the line is three quarters of an inch broad, whose barrel is two inches in diameter, and whose total diameter is two inches and three quarters, would receive a trout-line of twenty yards perfectly well. The whole diameter of such a reel need not exceed three inches and a quarter, nor the whole breadth one inch and a quarter. The wheels might multiply five times, and therefore the *average rate* at which it would

wind up the line would be nearly three feet for every revolution of the handle, whereas a common reel (now before me), multiplying four times, winds up at every turn of the handle, when the line is nearly out, only three inches, and when it is nearly wound up, eighteen inches, making a mean of ten inches and a half. The proposed reel would therefore wind up the line more than three times as fast, and besides this superior rapidity, would possess the advantage of winding up the line almost as quickly when it is nearly all out, as when it is nearly all in. It might also be so constructed as to weigh *very little* more than the common reel, made for such a line, and would be less liable to derangement, in consequence of both the multiplying wheels being larger than usual.

For Trout-fishing a well-made brass multiplying reel of medium size is to be preferred, such as is usually sold for 7 or 8 shillings. If attached to the extreme butt end of the rod, its weight will be found an advantage.

A reel has been invented lately containing a spiral spring which acts (in the manner of the spring in a window blind) upon the axis to wind up the line.

And it has been recently, and very ingeniously proposed by an experienced brother in our art to enclose, either wholly or partially, a kind of

reel in the butt of the rod. If sufficient rapidity can be given to such a reel, without much liability to derangement (which does not seem a very difficult task), it will be an invaluable and elegant acquisition. This hint seems to have been *partially* adopted since our first edition appeared.

End Line.

For making a good *End* or *Casting-line*, gut is recommended in preference to weed, or hair; it should be of the very best quality, round, and of even thickness, clear, and hyaline in colour. If preferred, it can be steeped a few minutes in warm ink and water.

It may be made light, although as strong or nearly so as the end of the line. The length of the bottom should be about equal to that of the rod: or say, *a foot shorter*.

Four or five of the very finest lengths of gut should first be chosen, then three or four more of the middle size, and lastly one or two much stronger, rejecting the flat ends.

These may be further proved before they are put together, thus: — One end of a length may be put between the teeth or held with pliers, and the other pulled until the gut breaks at the weakest part. This operation may be repeated with the best portions, until they snap with

considerable resistance. Then the ends may be reversed, and the operation proceeded with as before, until the last remaining piece is deemed strong enough for its office. This sacrifice of the bad portions will not appear extravagant, but the contrary, when it is considered that the loss of a whole or large part of the foot-line, with a fly or two, and perhaps a fine Trout, may be the consequence of an undue weakness existing in any part of it. After all, fineness is not to be sacrificed to strength, in Fly-tackle.

The selected lengths of gut must now be steeped in water, and tied together with the *gut-knot*, and the strongest must be provided with a loop, whereby it may be attached to the line. This should be done in such a manner, as to be able to detach it again readily: which is effected by having a simple knot at the end of your reel-line.

Hook.

The Hook requires particular attention. It is a trial of temper to discover that one has made a good fly upon a bad hook; but to lose a good fish in consequence is still more provoking.

The Kendal or Sneck-bend hook (see fig. 40. plate 17.) is generally preferred in the midland counties, if not made too long in the point. The Limerick is also a good hook for large flies,

but made lighter than the Irish pattern. The Carlisle or Round-bend hook may also rank amongst the good ones, fig. 38. plate 17. The Kirby is used by some, and is an elegant shape, for *small* flies; see fig. 37. All these, together with the Kirby Round, which is the Round-bend *lifted*, like the Kirby, are manufactured well by Messrs. Hutchinson and Son, of Kendal, successors to, and (late) partner of the famous Adlington. They have kindly undertaken to keep Grayling Hooks, and Hooks for the Double Palmers, made expressly for the present work.

To prove the temper of a hook, stick the point into a piece of soft wood before it is fastened to the gut, and pull by the shank. If it is well tempered, it will not break or bend without considerable resistance.

Dubbing Bag.

The DUBBING BAG contains everything in the world in the way of furs, mohairs, wools, and silks. Some people have neat little cabinets with cedar drawers made expressly; we cannot blame their taste, for they possess the means of keeping their materials safe and ready for use.

Feather Book.

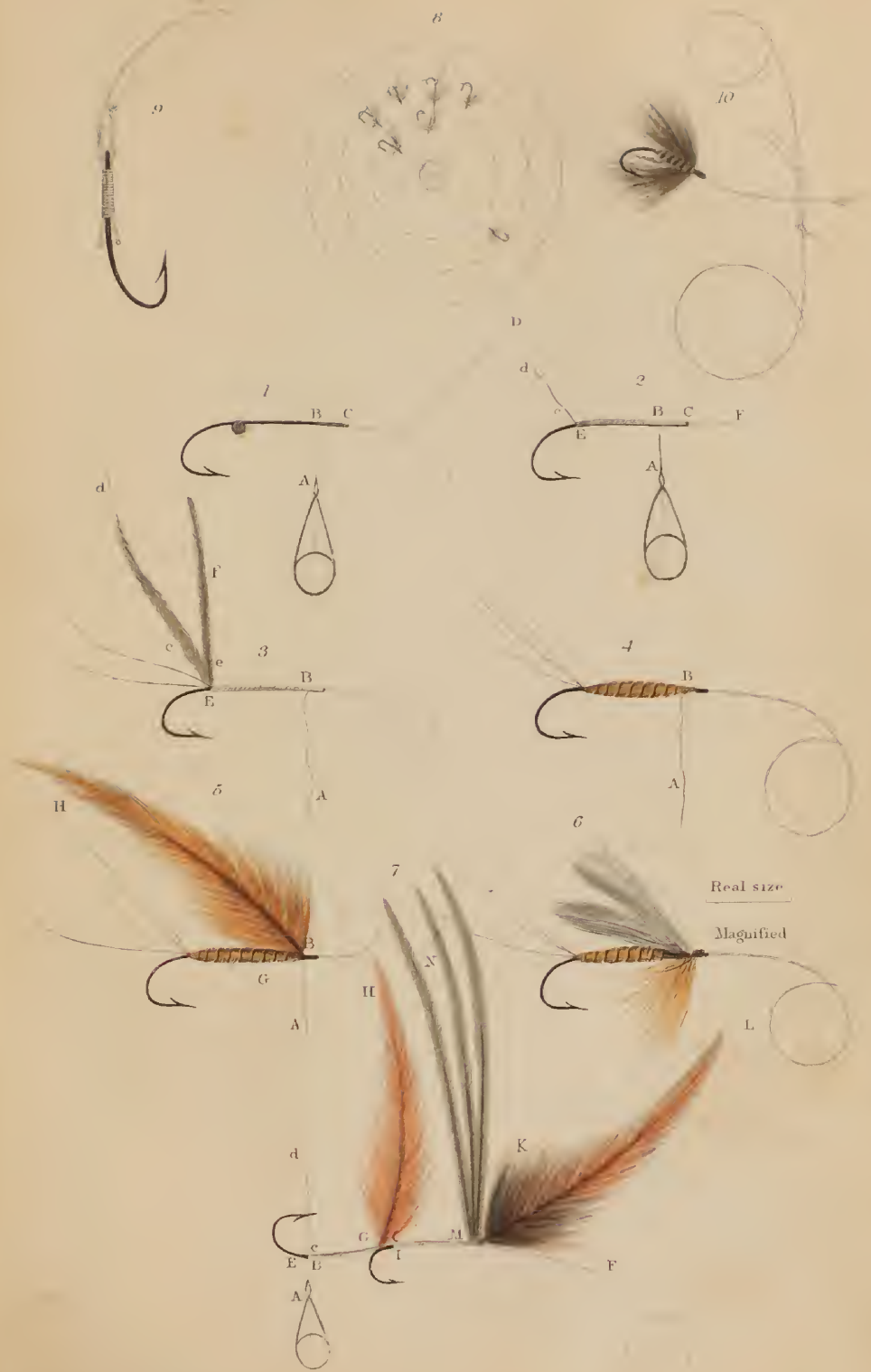
As good feathers are valuable, they should be guarded from the moth, by camphor, Russia

leather, or other preservatives. It is a good way to gum them in rows, in a book, placing a strip of paper over the quills. The most necessary feathers are : hackles from the neck of blue dun hens, especially those with a ginger-coloured edging : hackles from the neck, and near the tail of game cocks, both red and furnace : hackles from the neck of a black Spanish cock : scapular feathers of the woodcock or grouse : and brown mottled feathers from a partridge's back. These, with wings of the starling, landrail, and hen pheasant, and tail feathers of the wren, with some peacock and ostrich herl, may suffice to begin with. Some grey and brown mottled feathers from the wild drake may also be provided.

Fly Making.

Many books, after trying to tell us how to MAKE A FLY, very justly add, that the art cannot be communicated by writing, the practice must be seen. We shall follow the fashion by way of furnishing a few hints for those who are unable to meet with a friend to direct them.

1. Take a piece of very fine round gut, and singe it in a candle at one extremity, in order that it may be less liable to slip after being tied to the hook, previously *waxed*. Then holding a fine silk thread lightly waxed with soft shoemakers' wax, A B C D, plate 3. fig. 1., in one



hand, whip a part of it three or four times round the end of the shank of the hook, beginning to whip at B, and leaving a few inches of thread at A B hanging down, with a pair of forceps, or little weight at the end of it.

2. Hold the burnt end E, fig. 2., of the gut E C F, in contact with the shank of the hook, and wind tightly the portion of thread, C D of fig. 1. first once or twice round the gut close to the end of the shank, fig. 2., and then over the portion of gut C E, the three or four coils B C, already made, and the shank of the hook, C B E, leaving out the piece of thread, A B, still hanging down.

3. Bring two or three stylish whisks from a red hackle into the position shown in fig. 3., and bind them securely there, for the tail, by means of the same end (c, d) of silk as was last used. Bind in, at the same time, the extremity of a piece of fine gold twist (e, f), and also one end of some dubbing of orange and red floss silk mixed. Then spin the floss silk on to the remnant (c, d) of thread, and wind it on the shank, or wind it on the shank without spinning.

4. Run the remnant (c, d) round the shank, as far as B, and make it fast there with the thread A B; then wind the gold twist (e, f) over the coils made by c, d in the manner shown

in fig. 4., and make it fast also with the thread A B. This completes the body.

5. Bring the butt end of the red hackle stained amber colour into the position shown in fig. 5., tie it there by means of the well waxed thread, A B, and cut off the projecting piece (G) of the hackle.

6. Wind the other part of the hackle, B H, fig. 5., two or three times round the upper end of the body, and bind it tightly and neatly there with A B, and in such manner that the fibres may stand as shown in fig. 6. This represents the legs.

7. Take two pieces, as shown in fig. 6., from the under covert feather of a starling's wing, and bind them on (with the butt ends towards the top of the shank) firmly and neatly, at nearly the same place B (a little nearer to the top of the shank). Part them, if you choose; snip off the butt ends obliquely, bind the short stumps down upon the shank (so that they may not be seen), and fasten off. You will now possess a *Great Red Spinner* complete, provided always that you have seen a little more of the art than you have here read, and that you have been yourself a tolerably good *dubbing-spinner*.

To make a BUZZ-FLY with a hackle (see fig. 30. plate 14.), the upper or pointed end of the hackle

must be tied at the tail E, fig. 3. plate 3., with the ends of the material of the body (by means of the thread c, d), and the hackle must be wound up over the dubbing, and fastened off with the thread A B, after the gold or silver twist or other *ribbing* has been wound on and fastened off with A B.

If a Buzz-fly (as figs. 28. and 29. plate 13.) is to be made with any other feather than a hackle, the feather should be stroked back, its *pointed end* should be tied on at the shoulder B (fig. 4. plate 3.) of the fly, three or four coils of the feather should be made round the part above B, and the strands or fibres of the feather should be carefully picked out, as the coiling proceeds, otherwise it will not lie well. The butt end of the feather must be tied in at the head of the fly with the thread A B, which must be fastened off as usual.

In making a fly with wings intended to represent natural wings at rest (as fig. 2. plate 4.), the hackle feather may, in some cases, be dispensed with, and a little of the dubbing may be left out in the warping, or picked out of the body with a needle, after the winding or warping, to serve for legs instead of the hackle feather. In every other respect the fly may be made in the manner prescribed for the Great Red Spinner. (See above, p. 32.)

When a hackle or other feather is used for the purpose of imitating a winged fly buzz, its tint should be lighter than that of the natural wings; for the effect of the buzzing motion is to give this lighter appearance.

To make a Palmer.

1. Burn in a candle the end of a strong piece of gut, and whip a part of the thread A B C D, fig. 1. plate 3., round the end of the shank of a hook (as before, see p. 32.).

2. Place the gut in contact with the hook, and wind the portion of thread, C D, of fig. 1. over the part of gut C E, fig. 2., the three or four coils B C, and the shank of the hook C B E, &c., *not* leaving the end of thread, as before, hanging from B, but including it in the new coils, and allowing it to hang from E, fig. 7.

3. Wind rapidly (or run) c d back again to C, and include the butt end of a red hackle G H (fig. 7.) in the four or five last coils of this winding.

4. Bring another smaller hook, I, into the position shown in fig. 7., and attach it to the gut E C F, by winding the same thread, c d, round its shank and the gut. Then wind c d two or three times round the gut only (close to the end of the hook), and back again two or three coils over the shank, to form the head of the Palmer.

5. Tie in (with the same thread, c d) another hackle, K L, by the butt, together with three peacock's herls, M N.

6. Wind the thread c d with the peacock's herls, spun or rather twisted on it, back to C and make it fast there (or hold it tight), but do not cut off the remnant. Also wind the hackle K L over the dubbing of peacock's herl back to C, and tie it, picking out any strands which may happen to be tied in, and snip off the ends of K L.

7. Now wind the remaining dubbing-spun piece of silk (c d) over the coils of thread and the shank of the first-mentioned hook down to E; bind it there with the well-waxed thread A B; wind also the hackle G H over the dubbing down to E, make all fast by means of the thread A B, snip off all the remnants, and your red Palmer (see fig. 45. pl. 19.) will be ready to make a pilgrimage in search of a Trout.

Fly Books, Boxes, et cetera.

Having lost many flies out of the boxes and books usually sold, I at last adopted the following little device of a friend, which has certainly served to retain them better, and to keep them in better order for selection. Several round pieces of cardboard (as fig. 8. plate 3.) are first fitted to the box. At the centre of each of these

is fixed a piece of cork, round which two concentric circles of stitches of gut (or sometimes very well waxed fine silk thread) are formed, and they are covered at the back (or under side of the card) with a piece of paper pasted over them. On the upper side and under these stitches the barbs of the hooks are passed, the long ends of the gut are put through a hole in the centre of the cork, and these cards are packed in the box over each other, without injury or derangement to the flies upon them.

Experience has suggested a still better method of securing and preserving them in good order, viz. to stick them upon fine flannel, and to arrange them in a fly-case or book containing a separate space for each sort. By these means, when one is wanted in a hurry, it is easily and without derangement found. The flannel (fine Welsh flannel is the best) may be gummed upon the parchment of the leaves, the oil in which, together with that of the wool, preserves the hook from rust : a *point* of much importance.

The Basket or *Creel* should not be large and cumbersome, and should neatly fit the back. It may be painted black.

The *Landing-net* should be light, the handle long, and the net deep.

Nothing need here be said of the other little necessities, conveniences, and luxuries which

tackle-makers know so well how to describe and recommend. These gentlemen should be listened to, even although one may sometimes pay rather dearly for the whistle. More fish than cash is taken by their nets after all; and every body knows the peculiar comfort of being well provided with tackle (and *Prog* by the bye) when distant from the sources of provision. We also know the pride and pleasure of supplying a "Venator" with a seasonable well-made fly or a length of gut, all which has many a time led to an agreeable acquaintance with a brother angler.

RECIPES FOR DYEING AND STAINING FEATHERS, ETC.

1. TO DYE WHITE FEATHERS A DUN COLOUR.

Make a mordant by dissolving about a quarter of an ounce of alum in a pint of water, and slightly boil the feathers in it, taking care that they shall be thoroughly soaked or saturated with the solution; then boil them in other water with fustick, shumach, and a small quantity of copperas, put into it until they have assumed the required tint. The fustick and copperas will make a yellow dun tint; the shumach and copperas a blue dun tint. The greater the quantity of copperas the deeper will be the dye.

2. TO TURN RED HACKLES BROWN.

Put a piece of copperas, the size of half a walnut, into a pint of water; boil it, and whilst boiling put in the red feathers. Let them remain until by frequent examination they are found to have taken the proper colour.

3. TO STAIN FEATHERS AN OLIVE DUN, ETC.

Make a very strong infusion of the outside brown leaves or coating of an onion root, by allowing the ingredients to stand warm by the fire for ten or twelve hours. If dun feathers are boiled in this dye they will become an olive dun; and white feathers a yellow. If a small piece of copperas be added the latter colour will become a useful muddy yellow, darker or lighter as may be required, and approaching to a yellow olive dun, according to the quantity of copperas used.

4. TO DYE A MALLARD'S FEATHER FOR THE GREEN DRAKE.

Tie up some of the best feathers in bunches of a dozen, and boil them in the same mordant of alum as given in No. 1., merely to get the grease out. Then boil them in an infusion of fustick to procure a yellow, and subdue the brightness of this yellow by adding nitrate of copper to the infusion.

5. TO DYE FEATHERS DARK RED AND PURPLE.

Hackles of various colours, boiled (without alum) in an infusion of logwood and Brazil wood dust until they are as red as they can be made by this means, may be changed to a deeper red by putting them into a mixture of muriatic acid and tin, and to a purple by a warm solution of potash. As the muriatic acid is not to be *saturated* with tin, the solution must be much diluted. If it burns your tongue much, it will burn the feathers a little.

6. TO DYE RED HACKLES A CLARET COLOUR.

Boil a tea-spoonful of Brazil wood in half a pint of water, and simmer some lightish furniss hackles in this for a quarter of an hour. Then take them out and immerse them in muriate of tin, with the addition of a little muriatic acid. Wash and dry.

7. TO DYE FEATHERS VARIOUS SHADES OF RED, AMBER,
AND BROWN.

First boil them in the alum mordant (see No. 1.); secondly, boil them in an infusion of fustick strong enough to bring them to a bright yellow (about a table-spoonful to a pint of water), then boil them in a dye of mather, peach wood, or Brazil wood. To set the colour, put a few drops of "*dyer's spirit*," (i.e. nitrate of tin combined

with a small quantity of common salt,) which may be had from a silk dyer, into the last mentioned dye.

8. TO STAIN SILK GUT THE COLOUR OF RET, WEEDS, ETC.

Make an infusion of onion coatings (see No. 3.), put the gut into it when *quite cold*, and let it remain until the hue becomes as dark as may be required.

Gut may be stained in an infusion of green tea, a useful colour for some waters.

A dye of logwood will turn it to a pale blue; especially with the addition of a little copperas.

Although anglers mostly prefer the natural feather to the dyed one; yet, as the exact tints cannot be always obtained, artificial means must be frequently resorted to. Even prejudice too must admit that dyed feathers take the water more readily than others. The difficulty of *wetting* some feathers, especially of sea-fowl and pigeons, is a great objection to their use.

CHAP. III.

MANNER OF FISHING FOR TROUT AND GRAYLING.

“ With rod and line I sued the sport
Which that sweet season gave.”

WORDSWORTH.

WHEN the rod is put together, the rings upon it should fall into a line with each other. The reel containing the line is sometimes attached to a belt round the body, but generally to the rod at the distance of ten to fourteen inches from the end of the butt, (i. e.) that place where it produces a small and pleasant degree of counterbalance to the upper end of the rod.* The fine end of the line with a loop receives the foot line with a draw-knot, and to the fine end of the foot line is attached a fly or palmer, which is called the Stretcher. Other flies, which are made fast to the foot line, are called Droppers, two of which are generally sufficient. The first dropper is placed at about one yard and a quarter distant from the stretcher, the second about a yard from the first, each upon a piece of gut about four inches long. And the knots used

* Some of the best rod makers now place it *quite at the end*, and my practice seems to prove that this is the best position for it.

for this purpose are so contrived, that they can be detached and resumed at pleasure.

Throwing.

In order to acquire the art of throwing a fly, it may be advisable to practise, previously to visiting the stream, in a space free from trees, where a piece of paper may represent the spot required to be thrown to. Taking the wind in his back, the tyro, with a short line, at first, may attempt to cast within an inch or two of the paper, and afterwards, by degrees, lengthen his line as his improvement proceeds; he may then try to throw in such a direction that the wind may in some measure oppose the line and rod; and, lastly, he may practise throwing against the wind. In this way any person may become an adept in throwing a fly, much sooner than by trusting solely to the experience which he may get when at the water-side; for his attention being then wholly engrossed by the hope of a rise, &c., a bad habit may be very easily engendered, which will not be as easily got rid of.

He should endeavour to impart to the end of the line a uniform sweep or curve round his head; for if it returns too quickly or sharply from behind him, a crack will be heard and the fly whipped off. There is some little difficulty

in acquiring this manipulation. The larger the fly the more resistance it meets with in the air; this resistance causes it to make a better curve, and the danger of smacking it off is lessened. A Palmer, made as shown in plate 19., is not easily lost in this manner.

An attempt to describe *all* the precautions and manipulations requisite for throwing a fly successfully and gracefully would be as hopeless a task as that of trying to teach dancing by words. It must be abundantly evident that the fly should drop as lightly as possible on the water, and that an awkward unmannerly *splash* must inevitably mar the illusion.

Weather and Water.

The best days to select for fly-fishing are the warm and cloudy, with a gentle breeze from South or West causing a ripple upon the water; by which the fish is not only prevented from seeing the fisherman so plainly as in smooth water, but is also deprived of so good an opportunity of detecting the fly-maker's artifice.

The water after a flood sometimes remains for several days too turbid for fly-fishing. When it is very low in its bed and clear, the circumstances are also unpropitious, and success is obtained with difficulty. When the water is unusually high, though it be *not* discoloured, the

fish seem to be feeding more at the bottom than above : but these two last obstacles will not deter the sportsman from trying his skill.

Choice of Flies.

The selection of a fly requires more judgment, experience, and patience, than any other branch of the art. The beginner will soon discover that his choice cannot be absolutely decided by reference to the catalogue in the following chapter merely, or to any catalogue whatever. For when a fly is (in the former) said to be in season, it does not follow that it is abroad on every day of its existence. The state of the weather, in respect of heat and moisture, has great influence in this respect ; he should therefore bear in mind that the Coleopteron, or Beetle, will be on the water on hot days principally : the Ephemera, or fish fly, on rather cold days : the Phryganea, or water fly, as the Grannom, &c., on cloudy days with gleams of sunshine : the Diptera and other land flies as the Cow Dung, &c., on windy days. He would often do well to begin fishing with a Palmer as a stretcher, and the fly which *seems* most suitable for the day as a dropper, one yard and three-quarters from it : not changing these until he can discover what fly the fish are actually rising at. The Palmer

is never totally out of season, and is *a good fat bait*.

It should never be forgotten, that, let the state of the weather or the water (in respect of clearness) be what it may, success in fly-fishing very much depends upon showing the fish a good imitation, both in colour and size, of that insect which he has recently taken: an exact resemblance of the shape does not seem to be quite so essential a requisite as that of colour, since the former varies, according to the position of the insect either in or upon the water; but a small fly is usually employed when the water is fine, because the fish is then better enabled to detect an imitation, and because the small fly is more easily imitated. The resemblance of each particular colour, &c. is not required to be so exact as in the case of a large fly.

When the fly is thrown on the stream, some little resemblance of life must be attempted to be given to it; this I imagine to be best accomplished by throwing across and down the current: the top of the rod should in this case, after throwing, be held over the side of the stream, on which the fisherman stands ready to strike; the current will then act against the part of the line lying on the water, and cause the fly to sail over towards the same side, yet still to float down a

little, as a natural fly when struggling might be supposed to do.

When the fly is thrown into a still place, a few gentle jerks (after it has remained a second or two on the water) may be given to it; but no greater force should be used than is sufficient to move a foot or two at a time.

Some fishermen generally prefer their flies made *buzz*, (i. e.) representing probably flies with their wings fluttering, or in rapid motion; whilst others succeed best with their flies made with the wings to represent the appropriate natural wings *at comparative rest*. Probably a difference in the mode of fishing may create this difference of choice in the make of a fly. He whose manner of fishing is that of throwing down the stream, close to the bank on which he stands, and then drawing the fly up the current, towards him, or in any manner giving it a good deal of motion, may find that the Buzz fly, made with a three year old cock's hackle is best suited to that method, on account of the above mentioned fluttering appearance*; whilst the artifi-

* Any person may become convinced of this resemblance by visiting the Serpentine in Hyde Park (or similar waters) on a warm evening of April, and by very carefully watching the motions of the Golden Dun (see Chap. IV. No. 10.) immediately after it has quitted its nymph state. He will then see it *buzzing* along upon the surface of the water for some yards (previously to taking flight), and assuming an appearance exactly like that of the buzz-hackle, &c.

cial wings, resembling the natural wings of a fly partially immersed in the water, would be more suitable to the quieter mode of fishing.

Much valuable time is frequently lost by changing the fly often. It is better to persevere with that which produces tolerable sport, than to do so.

Rising short, &c.

A fish is said to *rise short* when he does not seize the bait voraciously and confidently; and this want of zeal is no doubt frequently occasioned by the imitation shown to him being too faint a resemblance of the real insect.

Fish will sometimes rise freely at one moment, and in ten minutes afterwards not a rise is to be seen. *One* frequent cause of this is no doubt a want of food to rise at. A sudden change of weather, so slight as to be hardly perceptible to us, may have great influence upon the insects, as we perceive that it often has upon cows, asses, dogs, and many other animals.

Another cause for diminution or cessation of sport may be the falling of the water in the bed of the brook or river, occasioned by the stopping of a mill above the situation of the fisherman. I have observed from the fishing-house very frequently a remarkable diminution of rises in a given interval to occur as soon as the water

began to drop in consequence of such a stoppage. When this case occurs he will, generally, do better by going below the next mill which is working, or above that which has just stopped, than by remaining in the first place.

We have already pointed out in the plan or map, and in Chap. I. p. 4., the places in a brook where Trout and Grayling are chiefly to be found: such places should be carefully whipped. Two or three throws in the same place are generally sufficient.

We have also shown above the great advantage of avoiding high stations, of seeking low ones, of stooping down sometimes as low as possible, and even of wading, provided that the fisherman takes care not to get "caught by the fish." Water-proof fishing boots as used in Scotland, or India-rubber overalls, as about Sheffield, are good things.

An endeavour to prevent our shadow, and even that of the rod, from falling on the water should also be adopted, when practicable.

Throwing to a Fish just risen and killing him.

When a fish has just risen at a natural object, it is well for the fisherman to try to throw into the curl occasioned by the rise, and left as a mark for him; but should the undulations have nearly died away before he can throw to the

spot, then he should throw (as nearly as he can judge) a yard or two above it, and allow the flies to float down to the supposed place of the fish: if a rise does not occur, it may be concluded that the fish has removed without seeing them: he may then try a yard or two on each side of the place where the curl appeared, when he may probably have a rise, and may possibly hook the fish, provided he has the knack of *striking*, which knack, like all others, is acquired only by practice; it must be done by a very sudden but not a very strong stroke, a twitch of the wrist. Having hooked him, the rod should be carefully retained in that position which will allow its greatest pliability to be exerted. To do this, it may be advisable to get it up over the shoulder, and present the butt-end towards the fish. A gentle pull must now be kept upon the fish, and he should be led down the stream by all means, making use of the reel as occasion may require to shorten the line. But if he runs in towards the bank upon which the fisherman stands, it will be necessary to approach the edge of the water as nearly as possible, holding the rod with an outstretched arm in almost a horizontal position; and if the reel is of the usual bad construction, it will be also necessary to pull in the line as quickly as possible with the left hand: this may prevent the fish from reaching his

harbour: if it should not, he will most likely twist the gut round roots or weeds, and break away.

To kill him, the nose must be kept up as much as possible; should he be very importunate and resolute, he may be lent a little more line now and then, but it must be promptly retaken with tremendous interest, and got up as short as possible. After various fruitless efforts to escape, which exhaust his strength, the nose may be got fairly out of the water, he may be towed gently to the side, and the landing net passed under him.

From the time of hooking the fish, if a large one, to the time of landing, care must be had that the line shall not be touched by the hand, excepting under the just mentioned circumstances; all should depend upon the pliability of the rod. In case a landing net should not be at hand, the reel may be stopped from running back, the rod stuck up in the ground by the spike, and both hands being disengaged, the fisherman may stoop down and grasp him firmly behind the gills. But the angler would do well rather to take the fish down stream to the nearest shallow, and draw him gradually upon some shelving bed of gravel, where this is practicable. The rod can then be retained in the left hand, while the fish, *even if a trout of $5\frac{1}{2}$ lbs. weight*, can

be gently but firmly grasped with the other ; as the writer has *once* proved, to his satisfaction.

If a fish of less than six ounces is hooked fairly, he may be cautiously lifted out by the line ; but should he begin to struggle in the least degree, he must be allowed to drop into the water, where he will be again under the influence of the pliable rod, when he must be towed up again and another effort made to secure him.

The principal differences between Trout and Grayling Fishing are, that the latter requires a more delicate hand, a quicker eye, and the use of smaller flies upon the finest gut. The strike must be made on the instant of the rise. The fish may be sometimes seen, if he be of a good size and the water bright, a few inches before he gets up to the fly, and the fisherman must strike immediately that he does so, for his motion at the instant of seizure is too rapid to be visible.

When the fisherman comes upon a favourable place for Grayling, he should recollect that this fish does not follow the fly as the Trout does, and should therefore allow it to float down the stream in a natural way ; for should a Grayling be waiting for it, when it is drawn away, “ the fish will be disappointed of that which it was the fisherman’s intention to entertain him with.”

It must also be remarked here that the mouth

of the Grayling is much more tender than that of the Trout, therefore much more care in landing is required ; and a landing net is generally indispensable, especially where the banks are high, for the mouth will seldom bear the weight of the fish out of the water.

An exception in regard to striking must be made in the case of *large* Grayling or Trout: as such will generally strike themselves, if the line is not too slack. There is much danger of breaking your hold or tackle by *striking* such fish ; and especially if you are throwing *down stream*. Many an angler has lost his fly, or broken the point of his hook, by striking at the moment of a good rise. The point of the hook is in danger, when it catches the bony part of a Trout's mouth ; and the fly is lost by the gut snapping, close to the head, when the movement of a large fish is simultaneous with the angler's striking. In such a case both angler and fish *pull at once*, a point always to be avoided.

CHAP. IV.

ILLUSTRATED CATALOGUE OF INSECTS FOR THE FLY-FISHING
SEASON, WITH THEIR IMITATIONS.

“Although the imitation of nature is the principal object to be desired by the flymaker, yet in some instances it will be advisable to enlarge or diminish the proportions of the artificial fly If the river be very high, the fly may be dressed larger than nature; if very low, the size may be reduced, and the body made thinner than the natural fly appears.” — BAINBRIDGE.

WE now enter upon our special province; for hitherto we have been occupied with introductory matters. This Fourth Chapter supposes the angler to be in some degree a proficient, fairly provided with the materials for making a fly; with the *finest* silks, red, lemon colour (called *primrose* silk by the angler), and purple, with orange and claret, if possible; also blue dun furs, light and dark, hare's ear, and fox; a few wings of the unsunned starling, as the softest, taken just before the birds quit the parent nest, also of the landrail, hen pheasant, and hen blackbird; and, above all, some *dun hackles*, from the neck of blue dun hens, light and dark, and some with a golden edging or fringe; some red and furnace hackles from the neck of game cocks,

some black from a Spanish cock ; some peacock herl of a ruddy copper tint ; and a little gold twist of two sizes. These and some of the *finest* gut, and choice sneckbend hooks are required of necessity. And it is supposed that the angler who aspires to make a fly can fasten a hook to gut *neatly* with very few turns of silk, and can *fasten-off* cleverly. But, now he is passing on to fly-making, let him observe that his silk had better be only half as thick as what he has hitherto considered the very finest. Ah ! what trouble would this hint have saved the writer when *he* began to make flies. The beginner will make twice as many turns with the silk as the skilful adept, and *his* silk therefore *must be of the finest*.

Aim first at *neatness*, not at strength. Adjust the hackle to the size of the hook, by observing that the fibre, or *half* the feather, is the *exact length* of the hook from head to bend. The same of the feather for the wing. As a rule, make the wing *exactly* the length of the hook. Afterwards you will vary a little, as judgment shall direct. By making all the flies in this list in turn you will acquire dexterity in imitation ; but a beginner would do well to take the easiest first, as No. 30., and then No. 27., and so proceed to the Duns and Spinners after a little practice.

The *Duns* are the small Ephemeridæ (or day-flies) in the *Imago* or winged state, but *imperfect*, and preparing to cast off a fine skin that envelopes them (wings and all), and to become *Spinners*. In the former state they are less transparent, and their wings best imitated by the upper surface of a starling's feather; but in the latter they are bright and glossy, and the *under* surface of the feather used for the wings should be shown.

The bodies of these delicate insects are sometimes beautifully imitated by stained hair and gut; but a fly should be made *as soft as silk, and softer*, if it is to be retained in the mouth of a fish many seconds. This is the chief reason why wings stiffened with varnish and gut bodies cannot supplant the old-fashioned furs and feathers.

It will be a great assistance to procure a set of flies dressed according to the directions of this book, which can be had of Mr. Eaton, Nos. 6. and 7. Crooked-lane, London, long commissioned by the author to sell his flies.

The first effect may possibly be one of disappointment, because they will not look so large or so bright as the engravings. But *neither will the real insects*. So that seeing them will correct erroneous impressions, and help the book in giving instruction most powerfully. One word to the *finished artist*, who may perchance cast a

glance at these pages, and we will enter on our Catalogue. His praise will be appreciated even when qualified with censure. If he grants that something has been done in the right direction by ascertaining the scientific *name* and somewhat of the habits of the chief angling flies, and that the imitations are simplified, as far as practicable, and the instructions sound in the main, this is great praise from a *judge*, or we are mistaken. After all, what is a descriptive catalogue of the best insects for fly-fishing? If followed blindly without intelligence, it will be as useless as a dictionary in the hand of untutored youth. But use it intelligently as a *help*, not as an *oracle*, and it will assist and facilitate your studies. But it requires ingenuity and perseverance, observation and judgment, aye, travel too, and experience, to make an angler!

A glance at the subjoined classification of insects may encourage the fly-fisher to take an interest in those *orders* on which his sport chiefly depends. These will be seen, in the sequel, to be the *Neuroptera* and *Diptera*; and, next to them, the *Coleoptera*.

Insects, properly so called, are *winged*, have *six legs* and *two antennæ*. They are divided into 1. *Mandibulata* (or chewers), and 2. *Haustellata* (suckers). Of the former there are four orders: *Coleoptera* (beetles), *Orthoptera* (grass-

hoppers, &c.), *Neuroptera* (may-flies, &c.), and *Hymenoptera* (bees, &c.). These are furnished with mandibles. The *Haustellata*, which live by suction, form five orders, as follows:—

Lepidoptera (moths and butterflies), *Diptera* (oak-fly, &c.), *Homoptera* (cicada, &c.), *Heteroptera* (known as “heavy cavalry,” &c.), and *Aphaniptera* (“light infantry,” &c.). These, then, are our nine orders of insects, to be still subdivided into *families*, *genera*, and *species*.

To descend to minor matters, the Hooks referred to below are those of Messrs. Hutchinson and Son, Kendal (successor and late partner of the famous Adlington), of the sneckbend form, longs and shorts, with two Nos. of *Grayling* Hooks, finer in the wire, and two of Double Hooks, for *Palmers*, made expressly for this edition. Should description, after all, fail to convey the minute instruction requisite for the beginner, he is recommended to seek the aid of some proficient, who will kindly examine and correct his first essays at fly-making, and send him patterns to copy, with the exact materials for each fly.*

* Mr. Edward Moore, of Stanton Ford, Baslow, Derbyshire, kindly permits a reference to be made to himself, as willing to afford assistance to the beginner, either by letter, or by receiving a visitor into his house on the Derwent, and imparting a few practical instructions by the water-side.

No. 1. THE RED FLY. (OLD JOAN.)

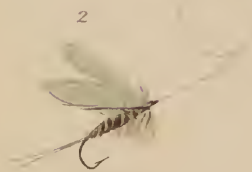
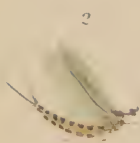
*Order, Neuroptera**Family, Perlidæ**Genus, Nemoura**Species, nebulosa.*

No. 2. THE BLUE DUN. (COCK-TAIL.)

*Order, Neuroptera**Family, Ephemeridæ**Genus, Potamanthus**Species, rufescens (Pseudimago).*

No. 3. THE RED SPINNER.

*Order, Neuroptera**Family, Ephemeridæ**Genus, Potamanthus**Species, rufescens (Imago).*



No. 1. THE RED FLY.

In a forward spring this fly comes out about the middle of February; it is in season until the end of March, and may be used on fine but rather windy days until the Blue Dun and other flies come in. I have taken very large Grayling with it. It is abundant at Bakewell in March and April.

IMITATION.

BODY. The dubbing is composed of the dark red part of squirrel's fur, mixed with an equal quantity of claret-coloured mohair, showing the most claret colour at the tail of the fly. This is spun on brown silk thread, to form the body.

WINGS. From the softest quill feather of the pea-hen's wing which approaches the tint.

LEGS. Of a claret-coloured *stained* hackle. No feather of its *natural* colour, that I know of, is of the proper shade. Clip some of the upper fibres off, that the wings may lie flat. Hook No. 2., short.

REMARKS. This is the earliest fly in North Derbyshire. The tint of the wings is that of a cake of glue held between the eye and the sun. It is best made hackle-way, with the under covert

feather of a woodcock's wing wound upon the above body. In Lancashire it is called "Old Joan," and the body is made rough with claret-coloured German wool. Thus made it kills well in the Derwent.

No. 2. THE BLUE DUN.

This fly lives three or four days in the state represented; then becomes the Red Spinner. It begins to be plentiful in the early part of March, should the weather be mild. When in full season it will be found on the water, chiefly on rather cold windy days. It endeavours to take flight in three or four seconds after emerging from the Pupa. On cold days it seems to have rather more difficulty in rising from the water than in warm weather, and consequently becomes very frequently food for fishes at the moment of its assuming the winged state.

IMITATION.

BODY. Fur of a hare's ear or face, spun very thinly on fine yellow silk, and wound on thickest

at the *shoulder*. Some of the dubbing is then picked out to form legs.

TAIL. Two fibres of a Dun Hackle.

WINGS. From a quill feather of the starling's wing, which may be slightly stained in onion dye.

LEGS. If a sufficient quantity of dubbing cannot be picked out for the legs, two or three turns of a Ginger Dun hackle can be added, and will help to keep the wings upright. Put these on last, whipping them on the *bare hook*, and finish at the head. Hook No. 2., Grayling.

REMARKS. This elegant fly kills well till June made as follows: *Body* of yellow silk waxed, with a *very little* Blue Dun fur from rat, mouse, mole, or *rabbit*, spun upon the silk so that the *yellow shows through*. Body tapering from shoulder to tail.

LEGS. A Honey Dun hackle; four or five turns.

WINGS. A starling's quill feather, put on last, on the bare hook, so as to stand up boldly.

Thus made, it is a *good Fly for Parr*. When you can put this fly together well you have reason to hope you are improving: for the Duns are delicate insects to imitate. Wax your silk *lightly*.

No. 4. WATER CRICKET.

*Order, Hemiptera**Family, Hydrometridæ**Genus, Velia**Species, rivulorum.*No. 5. GREAT DARK DRONE (SAW FLY,
GREAT DARK DUN.)*Order, Hymenoptera**Family, Tenthredinidæ**Genus, Dolerus**Species, niger.*

No. 6. COW-DUNG FLY.

*Order, Diptera**Family, Muscidæ**Genus, Scatophaga**Species, stercoraria.*

4



5



6



4



5



6



No. 3. THE RED SPINNER.

This is the name given to the Blue Dun, after it has cast off its olive dun coat. It now appears of a bright red brown, and its wings, which were before rather opaque, are transparent. It lives four or five days. It sports in the sunshine, and will be more successfully used in warm than cold weather; but when the sun becomes too powerful, this delicate insect seems to be disabled from continuing abroad in the middle of the day, and is to be considered more as an evening fly. Several of the other Spinners (or Ephemeriadæ in the *perfect imago* state) resemble it so nearly, that it may be kept as a model; the tint only varying, as will be subsequently shown. This is a difficult fly, for the beginner.

IMITATION.

BODY. Thin, of bright brown silk, ribbed with fine gold twist.

TAIL. Two whisks of a red cock's hackle.

WINGS. Upright, from a mottled grey feather of the mallard, stained to match the colour of the natural wings.

LEGS. Plain red cock's hackle. Hook, No. 2, Grayling.

REMARKS. Some of the best Derbyshire

anglers make it thus:—Wing, upright from under covert wing feather of a young grouse. Body, silk, the colour of Russia leather, and ribbed with the finest yellow silk. Two dun fibres for tail.

But after a frosty morning they make it as follows:—Wing, starling onion dyed: body, claret silk, legs dead furniss hackle. Thus made, it is called the “Frost Fly.”

No. 4. THE WATER CRICKET.

This insect lives upon small flies, &c., whose blood it sucks in a manner similar to that of the land spider. It runs upon the water, and darts upon its prey while struggling on the surface, and is amongst the first insects which the Trout finds there. In the hot summer months it is provided with wings. It may be fished with throughout this month, and the next, on all sorts of days, but principally when the Blue Dun is *not* very abundant upon the water.

IMITATION.

BODY. Orange floss silk, tied on with black silk thread.

•

LEGS. Are made best of one of the two longest feathers of a peawit's topping. If this cannot be easily procured, a black cock's hackle will answer the purpose and is easier to use. Either of these must be wound all down the body, and the fibres then *snipped* off, as far up as is shown in the figure. Hook No. 0, or 1.

REMARKS. The rib may be formed with black silk, and the hackle fastened under the shoulder. This is an easier way.

No. 5. GREAT DARK DRONE.

This fly is found upon the grass in a *very dull*, almost torpid, state, until nine or ten o'clock in the morning, whence its name of Drone; but when the sun begins to warm the air, it takes wing; and afterwards, if there be a slight breeze, it will be found upon the water.

There is a great variety of colour in the genus. A bright orange is sometimes seen all over the body, a lemon colour sometimes pervades only the middle part of the body, the knee joints are sometimes tipped with orange, sometimes orange veins appear in the wings; and there is one

No. 7. PEACOCK FLY. (LITTLE CHAP.)

*Order, Coleoptera**Family, Staphylinidæ**Genus, Quedius**Species, hæorrhous.*No. 8. MARCH BROWN. (DUN DRAKE, called in
Wales the COB FLY.)*Order, Neuroptera**Family, Ephemeridæ**Genus, Baëtis**Species, longicauda* ♂ (*Pseudimago*).

No. 9. GREAT RED SPINNER. (LIGHT MACKEREL.)

*Order, Neuroptera**Family, Ephemeridæ**Genus, Baëtis**Species, longicauda* (*Imago*).

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variety of the most beautiful pea green colour imaginable; but the black body is by far the most frequently met with, and therefore the fly with this colour is usually fished with.

IMITATION.

BODY. Mole fur, ribbed over with black ostrich, when spun on black silk.

WINGS AND LEGS. Made buzz with a dun hackle, the tint a shade or two lighter than that of the natural wings. Hook, No. 4, long.

When this fly is made with wings and legs not buzz, the dun feather of the wing of the mallard is used, and a grizzled hackle for legs, upon the same body.

REMARKS. The use of a *smaller* "Spring Black" than the above is recommended in preference.

BODY. Black ostrich herl.

WING AND LEGS. Purplish breast feather of a cock starling, wound on as a hackle. Hook, No. 1, long.

The larger black flies are seldom observed so early in the season. But a black fly of one sort or another is seldom useless on your lash.

No. 6. COW-DUNG FLY.

This fly is to be seen throughout the year. It is very abundant about the middle of March, when vast quantities are seen upon the water if there be a high wind. The colour of the male, when newly hatched, is a very bright tawny yellow, that of the female a greenish brown; she is rather smaller than the male, is found in as great numbers on the water, and is as good a fly to imitate. This insect is not in full season after the end of April, but in very blustering days may be used all the year round. It is a fly that varies much in *size*, the early specimens being mostly small.

IMITATION.

BODY. Yellow worsted, mohair, or camlet, mixed with a little dingy brown fur from the bear, and left rough, spun upon light brown silk.

WINGS. From the landrail.

LEGS. Of a ginger-coloured hackle.

The female is made buzz thus :

BODY. Olive-coloured mohair, or worsted, spun on silk of the same colour.

WINGS AND LEGS. Of a red cock's hackle, changed to a brown colour by putting it into a solution of copperas. Hook, No. 3, short.

No. 7. PEACOCK FLY.

This fly represents a small beetle, extremely abundant on warm sunny days. Its usual habit on alighting is to gather up the wings under its short wing scales (a habit like that of the earwig, which flies about in autumn); but when it falls upon water, it cannot always succeed in doing so; then, therefore, the wings lie nearly flat upon its back. However fine the day may be, and however clear the water, some sport may still be expected with this fly, until the end of May, but it is most successfully used on a sultry gloomy day.

IMITATION.

BODY. Ruddy brown peacock's herl, dressed with mulberry-coloured silk.

WINGS. The darkest part of a wing feather of the starling.

LEGS. A hackle stained dark purple; appearing black when looked down upon; but when held up to the light, having a most beautiful dark tortoiseshell hue. (See Dyes, Chap. II. article 5.) Hook, No. 1 or 2, short.

REMARKS. The *Buzz form* of this fly is a great Grayling killer, in spring and autumn, and is much prized on the Derwent, near Rowsley.

It is made thus: BODY, the reddest strand of a peacock's feather.

LEGS AND WINGS. A lightish dun hackle; made with mulberry-coloured silk. It is called "The Little Chap," and is described with variations, by *Arundo*, in "Practical Fly-fishing," p. 26.

No. 8. MARCH BROWN.

The nympha of this fly seems to require a warmer day to enable it to rise to the surface of the water, and to change to a fly, than is required for the similar rise and metamorphosis of the Blue Dun's nympha (No. 2.); the fly lives three days in the state represented in the figure, then changes into the Great Red Spinner (see fig. 9.). The male has a chocolate hue, and the female a green brown; it generally appears in great numbers upon the streams, where it is found towards the latter end of March, and is very eagerly devoured by the Trout. It continues in season until May; and although it can only occasionally be found later, recent experience has convinced me of the propriety of using it, upon some waters, as late even as July or August.

IMITATION.

BODY. Fur of the hare's face ribbed over with olive silk, and tied with brown.

TAIL. Two strands of a partridge feather.

WINGS. Quill feather from the middle of the hen pheasant's wing, which may be found of the exact shade.

LEGS. A brown mottled feather from the back of a partridge. Hook, No. 2, 3, or 4, long.

REMARKS. The female of this excellent fly must by no means be neglected; and observe that females are generally a few days *later* in their appearance on the water than the males.

BODY. Pale olive green wool, ribbed with fine gold twist.

LEGS. A honey dun hackle, that is less bright than a golden dun.

WINGS. Upright, the same as for the male; but the hackle will impart a lighter shade.

This is a great killer on the Dove. In Wales, they make it as a *hackle* with a brown mottled feather of a partridge, and rib with pale green silk.

It is equally celebrated in Scotland, as a first-rate killer: and certainly may be used with success, again in July.

No. 9. GREAT RED SPINNER.

The Dun Drake (fig. 8.) changes into this Spinner, and enjoys for three or four days its newest state and title. It seems to be in season much longer than the Dun Drake, and may even be used on warm evenings during most of the summer months; yet although the Dun Drake is not seen on the water after the middle of May, it would seem that it must still continue to come into existence afterwards, otherwise the Great Red Spinner could be in season only three or four days longer than the Dun Drake.*

IMITATION.

BODY. Hog's down dyed red-brown (or orange and brown floss silk mixed), spun on brown silk. It is ribbed with fine gold twist.

TAIL. Two long whisks of a bright amber red hackle.

WINGS. From an under covert feather of the starling's wing.

LEGS. A bright amber red hackle. Hook, No. 2, 3, or 4, long.

* Although I have spoken of this Spinner as appearing throughout most of the summer months, I am by no means certain that the specimens which are produced later than the middle of May may not be a distinct although similar species of *Baëtis*.

No. 10. GOLDEN DUN MIDGE.

The male has feathered antennæ, which the female has not. It seems to require a warm day to disengage itself from its water nymph. On such days very great sport may be had with it until the end of May. In its larva state, it is the Blood-worm of anglers.

IMITATION.

BODY. Olive floss silk ribbed with gold twist, and tied with dun silk thread.

WINGS. From the palest feather of a young starling.

LEGS. A pure dun hackle, wound on in front of the wings. Hook No. 1, Grayling.

REMARKS. No fly is more abundant, especially in showery weather, and just after rain. It is a prime favourite on the Dove. A delicate hand is required to make this fly *handsomely*, and the finest silk. Though shoemakers' soft wax is generally to be preferred, as most durable, colourless wax has an advantage for making delicate flies like this and the Jenny Spinner.

No. 10. GOLDEN DUN MIDGE. (GOLDEN DUN.)

Order, Diptera
Family, Tipulidæ
Genus, Chironomus
Species, plumosus.

No. 11. SAND FLY.

Order, Trichoptera
Family, Phryganidæ
Genus, Limnephilus
Species, flavus.

No. 12. STONE FLY.

Order, Neuroptera.
Family, Perlidæ.
Genus, Perla.
Species, bicaudata.

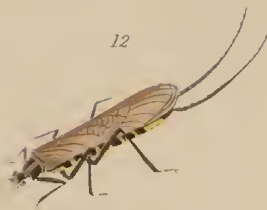
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No. 11. SAND FLY.

This fly comes from a water larva. It is highly extolled by Mr. Bainbridge, who says, "that it may be reckoned as one of the best flies for affording diversion which can possibly be selected, for it may be used successfully at all hours of the day, from April to the end of September, and is equally alluring to the Trout and Grayling." (Fly-Fisher's Guide, p. 143.) My own experience leads me to recommend the use of it during April and May, on days when there is no abundance of any particular insect on the water. A fly very like it is used in September and October, called the Cinnamon Fly.

IMITATION.

BODY. Of the sandy coloured fur from the hare's neck, spun on silk of the same colour.

WINGS. From the landrail's wing made full.

LEGS. From a light ginger feather from the neck of a hen. Hook, No. 2, long.

REMARKS. A good variation of this fly is to use *orange* silk, and show it most at the tail; and instead of a *light* ginger hen's hackle, use one with a dark stripe down the middle. In any case cut off the upper fibres of the hackle, that the wings may lie flat. The above is a good *Grayling* and *Dace* fly, in July and August.

No. 12. THE STONE FLY.

This fly comes from a water larva. It is heavy in its flight, but uses its legs with extreme activity, and is generally found amongst the stones, or close to the sides of the water. I have kept one alive for three weeks, during which time it drank much water. It is in season from the beginning of April until the end of May, and should be used in the rapid parts of streams, and on windy days where the water is rough.

IMITATION.

BODY. Fur of hare's ear mixed with yellow worsted or camlet, ribbed over with yellow silk, leaving most yellow at the tail.

TAIL. A strand or two of a brown mottled partridge feather.

WINGS. Quill feather from the hen pheasant's wing.

LEGS. A hackle stained greenish-brown: or a natural dark grizzle. Hook, No. 4 or 5, long.

REMARKS. This fly kills best, when used in its natural state, either by dibbing with a short line in still deep water: or by wading *up* the streams, and throwing carefully with a few yards of line. Used thus, it kills the largest trout from early morning till late at night.

No. 13. THE GRAVEL BED.

This fly is not found upon all waters: upon those where it is found it is extremely numerous on fine days; but in cold weather it seeks shelter amongst the larger stones of the gravel. It may be used all the day. It comes in about the middle of April, and lasts about three weeks.

IMITATION.

BODY. Dark dun, or lead-coloured silk thread dressed very fine.

WINGS. From an under covert feather of the woodcock's wing.

LEGS. A black cock's hackle rather long, wound, twice only, round the body. Hook, No. 0 or 1, long.

To make it buzz, a dark dun cock's hackle may be used, with a ginger tinge at the edges.

REMARKS. This fly kills well in May: weather bright, water clear, and *when no other fly will raise fish*. Some prefer the brightest *outside* (scapular) feather of woodcock's wing: and use the same feather, to make it buzz. The silk for the body should be of the most repulsive, ashy, livid hue that you can find.

No. 13. GRAVEL BED. (SPIDER FLY, SAND GNAT.)

Order, Diptera
Family, Tipulidæ
Genus, Anisomera
Species, obscura.

No. 14. GRANNOM. (GRANAM, GREEN TAIL, SHELL FLY.)

Order, Trichoptera
Family, Phryganidæ
Genus, Limnephilus
Species, striatus.

No. 15. YELLOW DUN. (DOTTEREL DUN.)

Order, Neuroptera
Family, Ephemeridæ
Genus, Baëtis
Species, flavescens (Pseudimago).

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No. 14. THE GRANNOM.

This fly comes from a water larva, and is upon the surface at about the same season as the Gravel Bed (No. 13.), and chiefly in the morning and evening. It lasts a little longer. The green tint of its body is derived from the colour of the eggs. It lays these upon the water. There are several species, but the figure (14.) represents the most common kind, and I have taken many of these flies out of the stomachs of Trout, even in August, which had a green colour at the tail of their bodies, and were as nearly as possible of the same size and general tint as those of April.

IMITATION.

BODY. Fur of hare's face left rough, spun on brown silk. A little green floss silk may be worked in at the tail to represent the bunch of eggs there.

WINGS. Feather from the partridge's wing, and made very full.

LEGS. A pale ginger hen's hackle. Hook, No. 2, long.

Made buzz with a feather from the back of the partridge's neck, wound upon the above body.

REMARKS. The Shell Fly, or Palmer, as this

is sometimes called, kills well made buzz with a landrail's scapular feather. Body, pea-green German wool. Make with orange silk, shown only at the head.

It is a good fly all the summer months, and into September.

No. 15. THE YELLOW DUN.

This beautiful fly, proceeding from a water nymph, lives in the form shown about three days. It is on the water generally from ten o'clock until three, and is one of our best flies. There is a larger variety upon some waters, having a greenish yellow cast in the body and butt of the wing, but which hitherto has not proved so successful as that represented.

IMITATION.

BODY. Yellow mohair, mixed with a little pale blue fur from a mouse. Or yellow silk thread waxed, and with the least blue rabbit fur spun upon it, and ribbed with yellow silk.

WINGS. Upright, from the lightest part of a young starling's quill feather.

LEGS. A light yellow dun hackle. Hook, No. 2, Grayling.

To make it buzz, a lighter dun hackle than is represented in the figure is wound upon the same body. In either case, make with primrose silk, and delicately.

This Yellow Dun changes to a Spinner of rather a lighter and yellower brown than that which the Blue Dun (No. 2.) turns to, is very nearly of the same size, and lives nine days. It is to be used on warm evenings. Its imitation may consequently be made of the same materials as that of the Red Spinner (see No. 3.), only choosing lighter tints.

REMARKS. If made as a hackle, prefer a cock's hackle for Grayling, a hen's hackle for Trout; and rib with unwaxed yellow silk over the body, as above. When made with the feather of a dotterel as a hackle, it is called the "Dotterel Dun," a far-famed fly.

No. 16. THE IRON BLUE DUN.

After emerging from its water nymph, this fly remains about two days in the state shown, and then changes to the Jenny Spinner (see No. 17.). It is one of the smallest flies worth the angler's notice, but not the least useful. The

No. 16. IRON BLUE DUN.

*Order, Neuroptera**Family, Ephemeridæ**Genus, Cloëon**Species, diptera (Pseudimago).*

No. 17. JENNY SPINNER. (SPINNING JENNY.)

*Order, Neuroptera**Family, Ephemeridæ**Genus, Cloëon**Species, diptera (Imago).*

No. 18. HAWTHORN FLY.

*Order, Diptera**Family, Tipulidæ**Genus, Bibio**Species, Marci ♂.*

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male has a brownish red crown or cap on his head. The female is also crowned, but her cap is too small to be easily seen. It is in season from the latter end of April until the middle of June, and is on the water chiefly on cold days; influenced by weather in a manner similar to the Blue Dun. (See No. 2.)

IMITATION.

BODY. Blue fur from a mole. Reddish brown floss silk may be tied on for the head.

TAIL. A whisk or two out of a yellow dun hackle.

WINGS. From a feather of the under-side of the cormorant's wing; or, in default thereof, a feather from the breast of the water hen, the tip of which must be used. Or the upper end of the wing feather of a tomtit when in full plumage.

LEGS. A very small yellow dun hackle. Hook, No. 0, short.

It is difficult to find a hackle feather of the tint proper to make this fly buzz.

REMARKS. A feather from the Merlin hawk's wing may be used, if procurable, to wing this fly. (*Arundo*, p. 29.)

No. 17. THE JENNY SPINNER.

This is the name given to the Iron Blue (No. 16.) in his new dress, and it lives four or five days after the metamorphosis, sporting in the still summer atmosphere. The Iron Blue must be coming out of its nympha at the same time that this fly is in season: the Iron Blue is, however, found on the water chiefly on cold days, from the end of April until the middle of June.* The Jenny Spinner lasts all the summer, is out on mild days, particularly towards the evening, and is a killing fly even when the water is extremely fine.

IMITATION.

BODY. White floss silk wound round the shank of the hook, &c. and tied on at the head and tail with brown silk, which must be shown.

TAIL. A whisk or two of a light dun hackle.

WINGS AND LEGS are best imitated by making them buzz; for which purpose the lightest dun hackle that can be procured should be used. Hook, No. 0., short.

* A little dark dun with a brown head, not exactly similar to, but very much like the Iron Blue, is found in August, and then a Spinner like the Jenny Spinner has an orange-coloured head, and the extremity of its body a lighter colour.

There is also upon some waters a rather smaller ephemeral fly, similar in colour to the Jenny Spinner, whose metamorphosis does not change much, in tint, from the original. It is to be found in some seasons, upon the Blithe, in Staffordshire; but upon lake Tal-y-llyr, in North Wales, this insect is so numerous, on warm evenings, as to form clouds, settling upon the dress of a person

No. 18. THE HAWTHORN FLY.

This fly may be seen about the last week in April, when the air is warm, sporting up and down by the sides of hedges, and may then be used. There are three very common species, one of the size represented, another much larger, and another much smaller. The female of each has dark wings, and opaque; whereas those of the male are black, but transparent. Her head is very much smaller than that of the male, and her body thicker. The male is most abundant. The figure (18.) represents him.

IMITATION.

BODY. Black ostrich herl.

WINGS. A feather of the starling's wing.

LEGS. A black cock's hackle; or one of the two largest feathers from a peawit's top-knot. Hook, No. 2. or 3., long.

The fly cannot very easily be made buzz, unless the female is imitated, in which case a black hackle, wound over the above mentioned black ostrich herl, will answer the purpose; and the fly so made is sometimes called the Black Palmer, or Black Caterpillar.

passing by the lake (or upon any other object), where, in five or ten minutes, it changes its coat, leaving the old one upon the dress, &c., which, if of a dark colour, becomes spangled with seemingly white spots. The tail increases to quite four times its original length when this change takes place.

No. 19. LITTLE YELLOW MAY DUN. (SILK FLY.)

*Order, Neuroptera**Family, Ephemeridæ**Genus, Cloëon**Species, striata (Pseudimago).*

No. 20. BLACK GNAT. (BLACK MIDGE.)

*Order, Diptera**Family, Empidæ**Genus, Rhamphomyia**Species, Aethiops.*No. 21. OAK FLY. (DOWNHILL FLY, ASH FLY, CAN-
NON FLY, DOWNLOOKER, WOODCOCK FLY.)*Order, Diptera**Family, Rhagionidæ**Genus, Leptis**Species, scolopacea.*

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No. 19. THE LITTLE YELLOW
MAY DUN.

This fly, proceeding from a water nymph, remains in the state represented about three days, then changes to a very light red, or amber-coloured, spinner. It lasts (as shown) in season until the Green Drake (No. 28.) comes in at the end of May, or beginning of June.

IMITATION.

BODY. Pale ginger-coloured fur from behind the hare's ear, ribbed over with yellow silk thread.

TAIL. One or two whisks from a dun hackle.

WINGS. Mottled feather from the mallard, stained as for the Green Drake. (See list of Dyes, Chap. III. p. 34. article 4.)

LEGS. A light dun hackle also very slightly stained yellowish in the same dye. Hook, No. 2., long.

The Light Amber Spinner, to which this fly changes, lives in its new state about four days. It is used successfully on the evenings of warm days.

No. 20. THE BLACK GNAT.

This insect skims the brook all day long in immense crowds, flying at great speed for about ten yards up and down the stream. When night approaches, or on cold wet days, it may be found on the grass at the water side. The stomachs of Trout have been found nearly gorged with this fly. It is in season from the beginning of May until the end of June. This is not a Gnat (Tipulidæ), but a midge (one of the Empidæ).

IMITATION.

BODY. Black ostrich herl.

WINGS. The dark part of a feather from the starling.

LEGS. A black hackle. Hook, No. 0, or 1, short.

To make it buzz, a light dun hen hackle may be wound upon the above body; and thus made, it kills decidedly best.

REMARKS. There is another imitation of the Black Gnat, of which Grayling are very fond.

BODY. Black ostrich herl.

WINGS AND LEGS. The purplish breast feather of a cock starling, wound on hackle-wise.

The Black *Midge* should be made like the *winged* imitation of the Black Gnat, but with the

substitution of a *thin* black silk body. These black flies resemble many small beetles, and may be ranked among "general flies." In fine low water, after Midsummer, they are most useful, in the rapid parts of streams.

No. 21. THE OAK FLY.

This fly may be found upon the trunks of any kind of tree or post near the water side. As soon as it alights, it turns its head downward. It is in season throughout May and June, and may be used with most success on windy days. It kills well in the natural state, by dibbing with it in the still deeps of trout rivers.

IMITATION.

BODY. Orange floss silk tied with ash-coloured silk thread, which may be shown at the tail and shoulders.

WINGS. From a scapular feather of the woodcock.

LEGS. A furnace hackle (i. e. a red cock's hackle, with a black list up the middle, and tinged with black also at the extremities of the

No. 22. TURKEY BROWN. (LITTLE BROWN DUN.)

*Order, Neuroptera**Family, Ephemeridæ**Genus, Potamanthus**Species, roseus (Pseudimago).*

No. 23. LITTLE DARK SPINNER.

*Order, Neuroptera**Family, Ephemeridæ**Genus, Potamanthus**Species, roseus (Imago).*

No. 24. YELLOW SALLY. (FLAT YELLOW.)

*Order, Neuroptera**Family, Perlidæ**Genus, Tenthredo**Species, viridis.*

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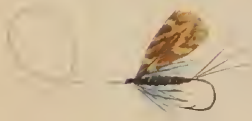
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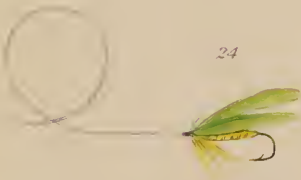
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fibres). This should be struck from tail to head, and the fibres snipped off nearly up to where the wings are set on, leaving a sufficient quantity for the legs. Hook, No. 2. or 3., long.

REMARKS. The small woodcock *and grouse* feathers (which can be used indifferently) make very neat *hackle* flies; and the beginner will find a pleasure in making the Oak Fly of various sizes in the following easy manner:—BODY, orange floss silk, ribbed with fine black silk, which may be slightly waxed. Then form the head of your fly with your arming silk (brown), and choosing a woodcock or grouse feather, *whose fibres are the exact length of the hook*, stroke it back, and tie it (upside down) by the *tip* to the arming of your hook, just clear of the head, and wind the feather round as a hackle, holding it by the quill, and fasten off under the shoulder.

The fly so made, of Green Drake size, is an excellent Chub fly in the Trent and most rivers, and may be used with a large Coch-y-bonddy on the same lash. It is not every angler who lives on the banks of a *trout* stream. *Optandum quidam erat.*

The imitations of the Oak Fly resemble also another fly still more abundant and common, called the Scorpion Fly (*Panorpa communis*).

No. 22. THE TURKEY BROWN.

This fly comes from a water nympa, lives two days as shown, and then turns to the Little Dark Spinner (see No. 23.). It is to be used on cold days; is a very good fly upon some waters, and is in season from about the time that the March Brown becomes scarce until the end of June.*

IMITATION.

BODY. Dark brown floss silk ribbed with purple silk thread.

TAIL. A whisk or two of a red cock's hackle, stained as for the legs.

WINGS. Tip of the brownest feather from a partridge's tail, or, if well selected, a feather may be found on the back of the partridge.

LEGS. Red cock's hackle stained a good brown with copperas.

To make it buzz, a feather from the Grouse may be tied on hackle-wise, in the manner shown for the Green Drake, No. 28.

* A fly is found upon some waters, similar in every respect to the above, except that the wings partake of the colour of the Iron Blue. The Little Dark Spinner, No. 23., answers for its metamorphosis.

No. 23. THE LITTLE DARK SPINNER.

This is the metamorphosis of the Turkey Brown (No. 22.). It is a most killing fly just at the beginning of dusk.

IMITATION.

BODY. Mulberry-coloured floss silk ribbed over with purple silk thread.

TAIL. Three or four whisks out of the stained hackle feather which is used for the legs.

WINGS. From a feather of the starling's wing.

LEGS. From a purple stained hackle which appears black when looked down upon, but which shines with a dark tortoise-shell tint when held up between the eye and the light. Hook, No. 1., long.

No. 24. THE YELLOW SALLY.

This fly has been believed by some persons to last in season only six days, but it continues for six weeks or more, and may be used not unprofitably on very warm days. The wings are transparent.

No. 25. SKY BLUE.

*Order, Neuroptera**Family, Ephemeridæ**Genus, Cloëon**Species, auliciformis (Pseudimago).*

No. 26. FERN FLY. (SOLDIER FLY.)

*Order, Coleoptera**Family, Telephoridæ**Genus, Telephorus**Species, lividus.*No. 27. ALDER FLY. (ORL FLY, in Wales called the
HUMP-BACK.)*Order, Neuroptera**Family, Sialidæ**Genus, Sialis**Species, lutarius.*

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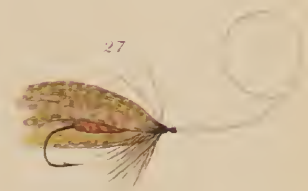
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IMITATION.

BODY. Any yellowish buff fur ribbed with yellow or apple-green silk.

WINGS. From a wing feather of a white hen, or fieldfare, stained pale yellow.

LEGS. From an extremely pale ginger hackle, or a white feather dyed of a yellowish tint.

Hook No. 2. short.

No. 25. SKY BLUE.

This fly comes from a water nymph, maintains its present state of existence two or three days, and then changes to a much lighter fly or spinner, which lives three or four days.

IMITATION.

BODY. Pale ginger mohair mixed with light blue fur.

TAIL. A whisk or two of the hackle used for the legs.

WINGS. From a feather of the sea swallow, or of a very light blue dun hen.

LEGS. Hackle stained a pale yellow.

Hook No. 0. short.

The body of the above-mentioned spinner is more brilliant than that of the Sky Blue; the wings perfectly transparent, and almost colourless; it is very little used.

No. 26. THE FERN FLY.

Two of the most common varieties of this genus are known by the appellations of the soldier and the sailor; one wears a red, the other a blue coat: both are much admired by fish, and taken until the end of July, principally on hot days. They live upon other insects, such as *aphides*, or plant-lice.

IMITATION.

BODY. Orange floss silk.

WINGS. The darkest part of a feather from the starling's wing.

LEGS. A red cock's hackle.

Hook No. 2. short.

To make it buzz, a lightish furnace hackle is wound upon the above body. It kills very well thus made.

No. 27. THE ALDER FLY.

This fly comes from a water nympha. It is earlier on some waters than on others. It lays its eggs upon the leaves of trees which overhang the water, and delights to skim the brook, but it may also be found at some distance from it. It is in season from about the last week in May until the end of June.

IMITATION.

BODY. Dark mulberry floss silk, or peacock's herl, tied with black silk.

WINGS. From a feather of a brown hen's or peahen's wing.

LEGS. Dark umber stained hackle, or, in case of need, a black cock's hackle will answer the purpose tolerably well.

Hook No. 3. or 4. long.

To make it buzz, a dark dun hackle tinged brown may be wound upon the above body.

REMARKS. Fine black German wool (a little) dubbed on dark reddish-brown silk, makes the body of this fly very well.

It is a good fly for dibbing in the natural state, when abundant.

No. 28. *a.* GREEN DRAKE. (MAY FLY, CADOW.)

Order, Neuroptera

Family, Ephemeridæ

Genus, Ephemera

Species, vulgata ♀ (*Pseudimago*).

No. 28. *b.* GREY DRAKE. (GLOSSY-WINGED DRAKE.)

Order, Neuroptera

Family, Ephemeridæ

Genus, Ephemera

Species, vulgata ♀ (*Imago*).

No. 29. ORANGE DUN.

Order, Neuroptera

Family, Ephemeridæ

Genus, Baetis

Species, sulphurea.



No. 28. *a.* THE GREEN DRAKE.

This fly, proceeding from a water nymph, lives three or four days as shown; then the female changes to the Grey Drake (No. 88. *b.*), and the male to the Black Drake (see p. 103.). The Green Drake cannot be said to be in season quite three weeks on an average. Its season depends greatly upon the state of the weather; and it will be found earlier upon the slowly running parts of the stream (such as mill dams) than on the rapid places.

IMITATION.

BODY. The middle part is of pale straw-coloured floss silk, ribbed with silver twist. The extremities are of a brown peacock's herl, tied with light brown silk thread.

TAIL. Three rabbit's whiskers.

WINGS AND LEGS. Made buzz from a mottled feather of the mallard, stained a pale greenish yellow. (See Dyes, Chap. II. article 4.)

Hook No. 5. 6. or 7. long.

To make it with wings in their state of rest, part of a feather similarly stained must be used, and a pale brown bittern's hackle, or, in case of need, a partridge feather must be wrapped round the same body under the wings.

No. 28. *b.* THE GREY DRAKE.

This is the metamorphosis of the female Green Drake. She lives three or four days, and is caught by the fish whilst laying her eggs on the water. She lasts a few days longer than the Green Drake, and is to be fished with in the evening. Some fishermen prefer other flies in season to this; when well made, it will however furnish excellent sport, especially towards the evening. The buzz form is intended to imitate it when struggling and half-drowned.

IMITATION.

BODY. The middle part is of white floss silk, ribbed over neatly with silver twist. The extremities are of brown peacock's herl tied with brown silk thread.

TAIL. Three rabbit's whiskers.

WINGS AND LEGS. Made buzz from a mottled feather of the mallard, stained a faint purple.

Hook No. 5. or 6. long.

To make it with wings at rest, the same pale purple stained feather may be used for them, and a dark purple stained hackle for the legs, upon the above body.

THE BLACK DRAKE

Is the male Green Drake metamorphosed. Its term of existence is about the same as that of the female above mentioned. It is smaller than the female, and very much darker, and is erroneously supposed by some, who call him the Death Drake, to kill her. He is never in season without her, but is not here represented, because he is not so fat and tempting a bait.

No. 29. THE ORANGE DUN.

This is another species of Dun of some importance on the Dove and other Derbyshire waters. It is equally attractive to Trout and Grayling, and is a prime favourite in its day — the end of June, July, and August.

IMITATION.

BODY. Dark orange silk, and the fly to be dressed with the same.

TAIL. Two fibres of a starling's feather.

LEGS. A dark dun hackle.

No. 30. MARLOW BUZZ (HAZEL FLY, COCH-A-
BONDDU, SHORN FLY).

Order, Coleoptera
Family, Melolonthidæ
Genus, Phyllopertha
Species, horticola.

No. 31. DARK MACKEREL.

Order, Neuroptera
Family, Ephemeridæ
Genus, Ephemera
Species, Danica ♀.



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31



WINGS. The dark part of a starling's quill feather.

Hook No. 2. long or short.

This fly should be made small and fine. Its metamorphosis is believed to be of a pale lemon tint, which should be used in the evenings at the same season. Imitation similar to No. 32.

No. 30. THE MARLOW BUZZ.

This insect comes from a pupa which inhabits the earth. It is very abundant in hot weather at the water side, from the beginning until the middle of June, flying about amongst poplar trees, and feeding upon the leaves. A very similar species is found in great numbers upon fern. They are called Bracken-clocks in the North, and well taken by the trout.

IMITATION.

BODY. Black ostrich herl twisted with peacock herl and made with red silk thread.

WINGS AND LEGS. Are made buzz with a dark furnace cock's hackle.

There are other species, some much smaller, of Red Beetles, and Ladybirds (*Coccinellidæ*), which may be imitated in a similar manner, and used when numerous. This is one of the largest employed.

To make it with wings at rest, the darkest part of the starling's wing and a red cock's hackle may be wound upon the above body in the same way as for the Fern Fly, No. 26.

REMARKS. A famous fly for both Trout and Grayling, and may be used till the end of September.

No. 31. THE DARK MACKEREL.

This is the name given to the insect represented by the figure on the right hand side of the plate, after it has changed from a dark kind of Green Drake shown on the left side. Both the male and female change to the dark brown, but the former is the smallest and darkest fly. Their habits are similar in every respect to the Green and the Grey Drake (Nos. 28. and 29.). Sir H. Davy says that "the Green Ephemera, or May Fly, lays her eggs sitting on the water." (*Salmonia*, p. 249.) My observations lead to the

conviction that neither the dark nor light Green Ephemeræ lay eggs (being imperfect insects), but that their metamorphoses, the Grey Drake and the Dark Mackerel*, lay eggs (whilst rising and falling, &c.). This is an important fly on the Blithe, and continues in season until the end of June and for part of July.

* The egg of this fly and that of all the last metamorphoses of the Ephemeridæ, here spoken of, sinks to the bottom of the water, and is there, in a few days, hatched into a white grig; this larva undergoes several transmutations before it becomes a nymphæ, which, rising to the surface at its appointed season, bursts the case or skin which incloses it (at the shoulders), displays beautiful wings, quits its old husk, and, after the lapse of a second or two, generally flies to the nearest terra firma, where it remains in solitude and shelter (from the wind and sun-beams) for about two days (see fig. 22. plate 11.). It then undergoes its last metamorphosis, and enters upon its imago or perfect state (see fig. 23.), changing the whole of its envelopes, even those of its fine tails and legs. The tails and the two fore legs of the male increases to about double their former length, those of the female receive an accession of not quite one third. The colour is generally altered, the wings become shining and transparent. The male carries two large stemmata upon his head, and a pair of callipers at the end of his body, which two peculiarities chiefly distinguish his appearance from the female. He is also usually rather smaller than she is. He may be seen merrily dancing, as it were, up and down in the air in vast crowds, frequently near a bush by the water side, whilst the female is to be discovered busily employed rising and falling and hovering over the water, and sometimes touching the surface and making use of her long tails to spring up again. She lays her eggs at this moment.

The genus *Potamanthus* has three tails, or caudal setæ; *Baëtis* and *Cloëon* have only two of these appendages.

No. 32. PALE EVENING DUN.

Order, Neuroptera
Family, Ephemeridæ
Genus, Cloëon
Species, Pumila.

No. 33. JULY DUN. (DARK BLUE DUN, MERLIN.)

Order, Neuroptera
Family, Ephemeridæ
Genus, Baëtis
Species, obscura.

No. 34. GOLD-EYED GAUZE WING.

Order, Neuroptera
Family, Hemerobiidæ
Genus, Chrysopa
Species, vulgaris.

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IMITATION.

BODY. Dark mulberry floss silk, ribbed with gold twist.

TAIL. Three rabbit's whiskers.

WINGS. From a brown mottled feather of the mallard, which hangs from the back over a part of the wing.

LEGS. A purple dyed hackle, appearing black when looked down upon, but of a dark tortoise-shell hue when held between the eye and the light. (See Dyes, Chap. II. article 5.)

No. 32. THE PALE EVENING DUN.

This fly comes from a water nymph, lives two or three days as shown, and then changes to a brighter yellow bodied fly. It may be strongly recommended as a fly which can be used when the water is fine.

IMITATION.

BODY. Yellow martin's fur spun on pale fawn-coloured silk thread.

WINGS. From a very fine grained feather of the starling's wing, stained of rather a lighter

yellow than that which is used for the Green Drake, No. 28. *a*.

LEGS. Pale dun hackle.

Hook No. 1. short.

The brighter yellow bodied spinner to which this changes lives four or five days, is fainter coloured, and more transparent in the wing. The change is not given, as the Dark Mackerel (No. 31.) is very much preferable for the evening.

REMARKS. The hair of an abortive calf, which would have been red if born at the proper time, is of a resplendent gold colour, and forms a good material for the legs of Summer Duns. It is tied on in the manner of wings. Make the above. *Small Red Spinner*, for June and July :—Body, clear yellow silk ; Legs, a red cock's hackle ; Wings, starling's quill feather, from the middle of the wing, and the bird a young one.

Hook No. 1. short.

No. 33. THE JULY DUN.

This fly comes from a water nymph, lives three or four days as shown, and then changes to a very small Dark Spinner. It affords a great treat to the Trout and Grayling, and lasts until

the August Dun takes its place, in the beginning of the following month.

IMITATION.

BODY. Mole's fur and pale yellow mohair, mixed and spun on yellow silk.

TAIL. Two or three whisks of a dark dun hackle.

WINGS. Dark part of a feather from the starling's wing, stained darker in strong onion dye.

LEGS. Dark dun hackle.

Hook No. 2. short.

To make it buzz, a lighter hackle may be wound upon the above body.

The tint of its metamorphosis is the same as that of the Dark Mackerel (No. 31.). It will catch well late in the evening.

REMARKS. At this season *several* kinds of Dun will be found on the water *together*; and especially a *lighter Blue* Dun than No. 2. described above, and a *Dark Orange* Dun. The angler's own observation, or the experience of others who know the water, will be called into requisition here.

The above "Dark Blue Dun," or "July Dun" of Ronalds, is a great favourite on the Dove at Mappleton, where the writer was in-

No. 35. *a.* WREN TAIL. (FROG-HOPPER, PALE

BROWN BENT-HOPPER.)

*Order, Homoptera**Family, Cercopidæ**Genus, Cercopis**Species, spumaria.*No. 35. *b.**Order, Homoptera**Family, Cercopidæ**Genus, Amblycephalus**Species, viridis.*

No. 36. RED ANT.

*Order, Hymenoptera**Family, Formicidæ**Genus, Myrmica**Species, rubra.*

No. 37. SILVER HORNS. (BLACK SILVER TWIST.)

*Order, Neuroptera**Sub-order, Trichoptera**Family, Leptoceridæ**Genus, Leptocerus**Species, niger.*



formed that one of the best anglers on the spot had it always on his lash. The wing-feather of the Merlin Hawk which "Arundo" commends for this fly was found very successful in this very water. (Practical Fly Fishing, p. 22.)

No. 34. THE GOLD-EYED GAUZE-WING.

This is rather a scarce insect upon some waters, but where it is found affords great sport on windy days. Both larger and smaller species than that represented, of this apple-green tint, are to be found, and also one of a lighter and yellower shade. The eye possesses wonderful brilliancy. It may be used as soon as the Green Drake goes out, for about three weeks, and is to be found even as late as September. The smell is fetid.

IMITATION.

BODY. Very pale yellowish green floss silk, tied on with silk thread of the same colour.

LEGS. The palest blue dun hackle which can be procured.

WINGS. Any transparent feather, stained slightly green. (See "Ephemera.")

Hook No. 2. long.

REMARKS. To show the multiplicity of similar species, out of which one has to be selected as a type, there are *eleven* British species of the "Gauze-wing," viz. *vittata*, *vulgaris*, *subfalcata*, *alba*, *angustipennis*, *7-punctata*, *aspersa*, *abbreviata*, *perla*, *capitata*, and *fulviceps*. No wonder imitations differ.

No. 35. *a.* and *b.* THE WREN TAIL.

There are many species of these *hoppers*: the pale brown, the dark brown, and the greenish blue are the most common. They are very busy on hot days, hopping about and taking flights of about twenty yards, and this is the time to use the imitation, for they sometimes drop short and fall upon the water. In colder weather they are found upon the long grass principally: not much on the water. On very cold days they seem to seek shelter near the roots of the grass.

IMITATION.

BODY. Ginger-coloured fur ribbed with gold twist.

WINGS AND LEGS. Feather from a wren's tail, wound on hackle-wise.

Hook No. 1. short.

No. 36. THE RED ANT.

This insect is very abundant on the water after a swarm or flight of Ants and Emmets, the time of which is uncertain. "Myriads of swarming ants," observes Mr. Newman, in his "History of Insects," "attracted by the brilliant surface of water, illumined by an autumnal sun, rush into the fatal current, and are seen no more." There are many species, but the black and the red, of the size shown, and a size smaller, which are used later in the season, are enough for the angler. The ant-eggs used as a bottom bait, after a fresh, are, in fact, cocoons, enclosing the insects in the pupa state.

IMITATION.

BODY. Peacock's herl tied with red-brown silk.

WINGS. From a feather of the light part of a starling's wing.

LEGS. A red cock's hackle.

Hook No. 00. 0. or 1. long or short.

THE BLACK ANT is made of peacock's herl, and black ostrich mixed, for the body. Wings from the darkest part of the starling's wing, and legs a black cock's hackle.

No. 38. AUGUST DUN.

*Order, Neuroptera**Family, Ephemeridæ**Genus, Baëtis**Species, fluminum (Pseudimago).*

No. 39. ORANGE FLY.

*Order, Hymenoptera**Family, Ichneumonidæ**Genus, Pachymerus**Species, calcitrator.*

No. 40. CINNAMON FLY.

*Order, Neuroptera**Sub-order, Trichoptera**Family, Phryganidæ**Genus, Limnephilus**Species, stigmaticus.*

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No. 37. THE SILVER HORNS.

This fly is extremely abundant upon some waters, and is well taken both by the Trout and Grayling until the end of August throughout the day, and principally in showery weather. The figure represents the female. The male has black horns.*

IMITATION.

BODY. Black ostrich herl tied with black silk, and dressed off.

WINGS. Feather from the wing of the cock black-bird.

LEGS. Small black cock's hackle.

HORNS. Grey feather of the mallard.

Hook No. 2. short.

To make it buzz the body is ribbed with silver-twist upon the black ostrich herl, and a nearly black hackle wrapped all down.

* There is a species upon some waters which has a shining jet-black wing.

No. 38. THE AUGUST DUN.

This fly comes from a water nympha, lives two or three days, as shown, then changes to a Red Spinner. It is quite as important a fly for this month as the March Brown is for March. It is in season from the beginning of August to the middle of September.

IMITATION.

BODY. Brown floss silk ribbed with yellow silk thread.

TAIL. Two rabbit's whiskers.

WINGS. Feather of a brown hen's wing.

LEGS. Plain red hackle stained brown.

Hook No. 2. short.

It is made buzz with a grouse feather wound upon the above body.

The Red Spinner, to which it changes, is very similar to that which the Blue Dun (No. 2.) turns to, and is a good fly on a mild evening.

No. 39. THE ORANGE FLY.

This is one of the best flies that can be used, especially for Grayling. There are a great many species ; some larger, some smaller, than the representation. It may be used all day. Although discovered alive with difficulty, it is found abundant in the stomachs of the fish. It is furnished with an apparatus called the sting, or *ovipositor*, used for the purpose of piercing the skin of caterpillars, in which it deposits its eggs, the grub from which grows in, and ultimately kills, the insect in which it was hatched. These Ichneumon flies are the great check to the multiplication of the insect tribes.

IMITATION.

BODY. Orange floss silk tied on with black silk thread.

WINGS. Dark part of the starling's wing, or feather of a hen blackbird.

LEGS. A very dark furnace hackle.

Hook No. 1. short.

No. 41. BLUE BOTTLE. (HOUSE FLY, SHADE FLY.)

Order, Diptera
Family, Muscidae
Genus, Sarcophaga
Species, striata.

No. 42. WHIRLING BLUE DUN.

Order, Neuroptera
Family, Ephemeridæ
Genus, Cloëon
Species, ochracea (Pseudimago).

No. 43. LITTLE PALE BLUE DUN. (WILLOW FLY.)

Order, Neuroptera
Family, Ephemeridæ
Genus, Cloëon
Species, fuscata (Pseudimago).

No. 44. WILLOW FLY. (SHAMROCK FLY.)

Order, Neuroptera
Family, Perlidæ
Genus, Nemoura
Species, fuliginosa.

PLATE 1



No. 40. THE CINNAMON FLY.

This fly comes from a water pupa. There are many species. The larger ones being stronger can resist the force of rain and wind better than that represented, and are therefore not so well known to the fish. It should be used after a heavy shower, and also on a windy day. In both cases very great diversion may be expected with it.

IMITATION.

BODY. Fawn-coloured floss silk, tied on with silk thread of the same colour.

WINGS. Feather of a yellow brown hen's wing, rather darker than the landrail's wing feather.

LEGS. A ginger hackle.

It is made buzz with a red hackle from the grouse, or a red hackle stained brown with copperas, and tied on the same body.

Hook No. 3. long.

REMARKS. So numerous are the species of *Caddis Fly* resembling the above, different on different waters, that the angler must use his own observation. A wren's tail feather, wound round a hare's-ear body, will aid him in giving the *rich brown* tint common to many of the genus, and the landrail's quill feather will be sufficiently dark with this hackle.

The Sheffield anglers use a fly they call Partridge Rump, which may be noticed here as proper for this part of the season.

Hook No. 4. long; body, yellow silk (not floss); feather, partridge rump. The head is formed with copper-coloured peacock's herl. A good killer in Derbyshire waters. It is the yellow-bodied Harry-long-legs.

No. 41. THE BLUE BOTTLE.

This and the House Fly become blind and weak in this month, and are therefore frequently driven on to the water on windy days, when very good sport may be expected with them. The Blue Bottle is perhaps to be preferred. It may be used until cold weather sets in, especially after a frosty night.

IMITATION.

BODY. Bright blue floss silk tied with light brown silk thread, showing the brown at the head.

WINGS. Feather of the starling's wing.

LEGS. Black hackle from a cock wrapped down the principal part of the body.

Hook No. 3. short.

To make it buzz, a dark dun hackle may be wound upon the above body.

REMARKS. The House or Shade-Fly (*Musca domestica*) may be noticed here. A first-rate angler used to make it thus, for July : —

WINGS. From under covert feather of water-hen's wing.

LEGS. Blue starling feather.

BODY. Light brown and pea-green wool mixed.

HEAD. Green peacock's herl, and three laps under the wings.

Hook No. 2. short.

A first-rate killer.

The *larvæ* of various flesh-flies, of which, under the name of "gentles," even the fly-fisher at times avails himself, to conceal his hook, have a curious history of their own. The eggs laid by the parent fly, when she "blows" any fish or flesh, sometimes hatch in the short space of two hours. It has been found (by Redi) that these maggots, of which one day it took thirty to weigh a grain, weighed the next day seven grains each : having thus in twenty-four hours become about 200 times heavier than before (*Kirby and Spence*, vol. ii. p. 398.). When full grown, these gentles quit their prey, to bury, and assume the pupa state.

No. 42. THE WHIRLING BLUE
DUN.

This fly comes from a water nymph, lives about three days as shown, then turns to a Light Red Spinner. It is in season until the middle of October, and on the water chiefly in blustering cold weather. It has been supposed to be a second edition of the Yellow Dun of April. If compared with that it will be found rather smaller and more of a ginger colour.

IMITATION.

BODY. Squirrel's red brown fur mixed with yellow mohair, tied with yellow silk thread well waxed.

TAIL. One or two whisks of a pale ginger hackle.

WINGS. Feather from a starling's wing not very light.

LEGS. Pale ginger hackle.

Hook No. 2. Grayling.

THE RED SPINNER lives three or four days. In making it, reference may be had to fig. 3. plate 4. It must be rather lighter than that figure.

No. 43. THE LITTLE PALE BLUE
DUN.

This fly comes from a water nymph, lives two or three days as shown, then changes to a more delicate fly than that represented. It is upon the water at the same time as the Whirling Blue (No. 42.), and lasts until the end of the fishing season. It is very abundant, and taken equally well by both Trout and Grayling.

IMITATION.

BODY. Very pale blue fur mixed with a very little yellow mohair.

WINGS. Feather from the sea swallow.

LEGS. The palest blue hackle to be had.

Hook No. 1. Grayling.

To make it buzz, a sea swallow's feather only may be wound upon the same body.

The metamorphosis of this fly has very transparent wings. It is too delicate to be imitated.

REMARKS. This is called by some anglers the "Willow Fly."

No. 44. THE WILLOW (OR WITHY)
FLY.

This fly comes from a water larva. It is extremely abundant during this month and the next, and even later in the season. On very fine days it may be even found on the water in February. It generally flutters across the stream, and is best imitated buzz fashion.

IMITATION.

BODY. Mole's fur (a very little) spun upon yellow silk.

WINGS AND LEGS. A dark dun hen's hackle with the edges strongly tinged a copper colour: sometimes called a *golden dun* feather, or a *yellow dun*.

Hook No. 1. Grayling.

REMARKS. As the fishing at this season, and in October, is, or should be, for *Grayling* exclusively, the hackle form of No. 7. may be recalled to the angler's notice, as now coming again into season, and killing the largest fish.

This and the Willow Fly, made as above, or with the addition of wings from the dark part of a starling's quill feather, are good killers in the Derwent till November.

In the excellent little manual, called "Practical Fly-fishing," by "Arundo," the above is called the "Shamrock Fly."

No. 45. THE RED PALMER.

This is the caterpillar of *Arctia caja*, or the Garden Tiger moth. I have found this Palmer more abundantly than any other early in the Spring, and can recommend the use of it as soon as the water is fit for fishing after a flood; also on windy days. Cuvier remarks that this caterpillar changes its skin ten times, during its growth, changing slightly its colours.

IMITATION.

Peacock herl with a red cock's hackle wrapped over it, and tied with light brown or red silk thread. This corresponds also with the larvæ of the Drinker Moth (*Odonestis potatoaria*).

It may be varied by a *ruby stained* hackle; which answers well on the Dove. Hook No. 6. Palmers.

No. 46. THE BROWN PALMER.

This is the caterpillar of *Spilosoma lubricipeda*, or the Spotted Buff Ermine Moth, found on nettles, &c., in July and August.

It will catch fish throughout the fishing season, and may be used with most success after a flood and on windy days.

IMITATION.

Mulberry-coloured worsted spun on brown silk, and a brown stained cock's hackle wrapped over the whole.

It may be varied (to imitate *S. Menthastris*) by making the body of ostrich herl, of a drab colour, and winding a grizzled hackle over.

Hook No. 6. Palmers.

No. 47. THE BLACK AND RED PALMER.

This is the caterpillar of *Arctia caja*, or the Garden Tiger Moth, *full-grown*.

It is used in May, June, and July principally.

IMITATION.

Black ostrich herl ribbed with gold twist, and a red cock's hackle wrapped over it. This Fly



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may be made *large*, and will kill large Thames Trout, of 3, 4, and 5 lbs. weight, and Salmon Trout, with great success. The feather at the shoulder should be a large furnace hackle from the *rump* of a game cock, and the ostrich herl should be wound *thickest* there. The gold twist should be shown clearly at the tail, and the tail-hook should be large and strong.

Hook No. 7. Palmers.

Not many years ago, a gentleman had just arrived, about the middle of June, as a stranger at a Fishing Station on the Thames. Meeting the head Fisherman of the place by the water-side, he asked "What Fly was most successful in raising the Thames Trout there"; and receiving no immediate reply, suggested the above "Large Red Palmer." "Oh, no!" was the reply: "*perfectly* useless." "Indeed!" said the gentleman, "it raises large Trout everywhere *else* in England." "It's useless *here*, however." "Well, I shall give it the first trial, nevertheless."

That evening the gentleman went down *about half-past six*, and about seven o'clock had landed a Trout of $3\frac{1}{2}$ lbs. with a fly made as above.

Another evening he hooked and played a larger, and lost it. Subsequently he took two one morning, before 7 A. M., the larger of which weighed $5\frac{1}{2}$ lbs.; and various others.

The Large Red Palmer was the "*best fly that could be used*" for Trout there ever after.

Show plenty of gold at the tail ; and let your feather be a good black near the head, and shade off to a rich game red. A fly of this kind falls more lightly, and shows more life in the water, than other large flies. The elastic fibres of the hackle open and close as it is drawn across the stream, and it displays its colours to the best advantage. A hackle fly is never on its back. The Black and Red, or Large Red, Palmer, will ever be a standard Trout fly. For a Dropper, a smaller fly of similar materials, on a *single* hook (No. 7.), will be found a good accompaniment. That this is taken for a beetle of some kind by the Trout is highly probable.

The caterpillar of the Garden Tiger Moth is common on *nettles* during the autumn and spring ; that of the Drinker Moth is abundant in spring on *rank grass*. Both rejoice in the familiar name of *Woolly-bears* in some places. Before these spin their cocoons, which they do in May and June, they wander from their food often to a great distance ; and from this circumstance are called *Palmers*. It is probably during these pilgrimages mostly that they fall a prey to the fish through various mischances.

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THE END.

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